SOME BITS OF GASTON COUNTY TEXTILE HISTORY is a follow-up story by James Lee Love on THE PINHOOK MILL, published in January. Turn to Page 39.

L.U.N.G.A
Commerce R.

extile bulletin

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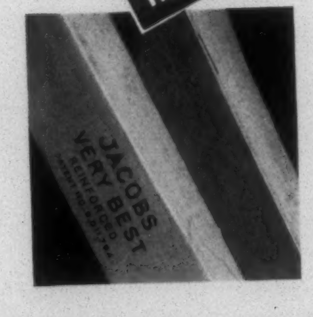
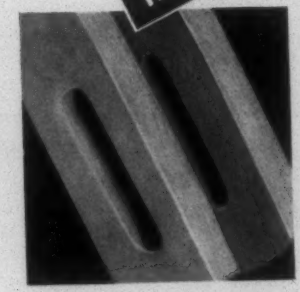
JACOBS Reinforced "VERYBEST" Lug Straps are

Reinforced at ALL 3 places!

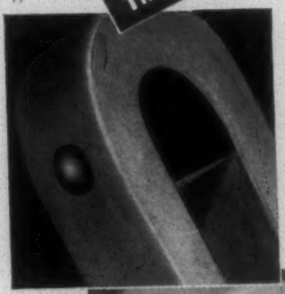
MAR 29 1948



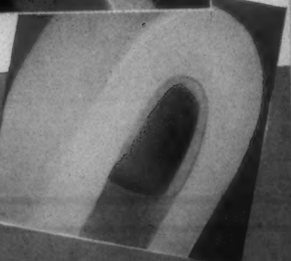
The Sides



The Slots



The Heel



Army Duck — in laminations — is built in at each of these three wear, strain, and stress points. The short "Verybest" Lug Strap is also reinforced at all three places, and is a fit working mate for the long Reinforced "Verybest" Lug Strap — very best for the weaving industry.

E. H. JACOBS MFG. CO.
ESTABLISHED 1869
DANIELSON, CONN. CHARLOTTE, N. C.

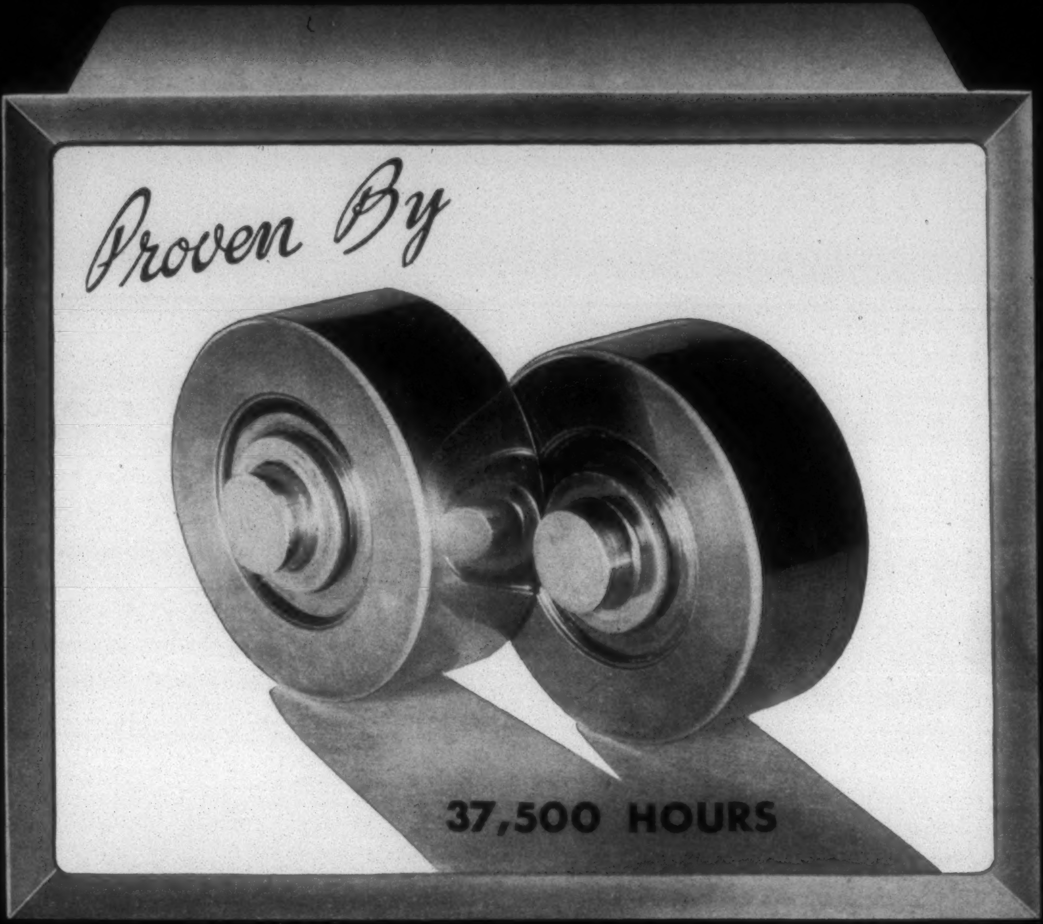
SONOCO
Leads the World
in TEXTILE PAPER CARRIERS

A leader must lead—and SONOCO takes a resolute view of their position in the field of textile paper carriers. The department of largest percentage growth in recent years at SONOCO is the laboratory. Continuous research and development is both an obligation and a privilege of SONOCO'S leadership in their field.

sonoco
PAPER CARRIERS
REG. U.S. PAT. OFF.

SONOCO PRODUCTS COMPANY
BRANTFORD ONT. | HARTSVILLE S. C. | MYSTIC CONN.
DEPENDABLE SOURCE OF SUPPLY

TEXTILE BULLETIN is published monthly by Clark Publishing Co., 218 West Morehead Street, Charlotte 2, N. C. Subscription $1.50 per year in advance, $3 for three years. Entered as second-class mail matter March 2, 1911, at Postoffice, Charlotte, N. C., under Act of Congress, March 2, 1897.



D

Anti friction bearing treadle rolls have proven themselves. Rolls shown above ran 37,500 hours. New Departure Engineers estimate they would run another 20,000. Think of it. 57,500 hours!

Check these advantages.

High carbon, heat treated chrome steel enables roll surface to withstand severe shock and wear.

Double felt, labyrinth seals keep dirt and lint out, while preventing leakage of permanent lubricant. No internal greasing or oiling necessary.

Extra large balls rolling in smooth, hardened raceways give longer life on the heaviest weaves.

Round pins permit roll to seat itself in treadle pocket. This combination will not lock, eliminating danger of flash fire.

Cut maintenance costs now. Buy Anti friction bearing treadle rolls for all your looms. We can make immediate delivery.

DRAPER CORPORATION

FORECAST

Today . . . tomorrow . . . always

IDEAL PROCESSING WEATHER

The

AMCO EVAPORATIVE COOLING AT PONEMAH IMPROVES YARN STRENGTH — AIDS SPINNING

Part and parcel of Ponemah's reputation for fine count cottons and rayons are the continuous efforts made to assure fabric superiority. An important recent step was the introduction of AMCO Evaporative Cooling.

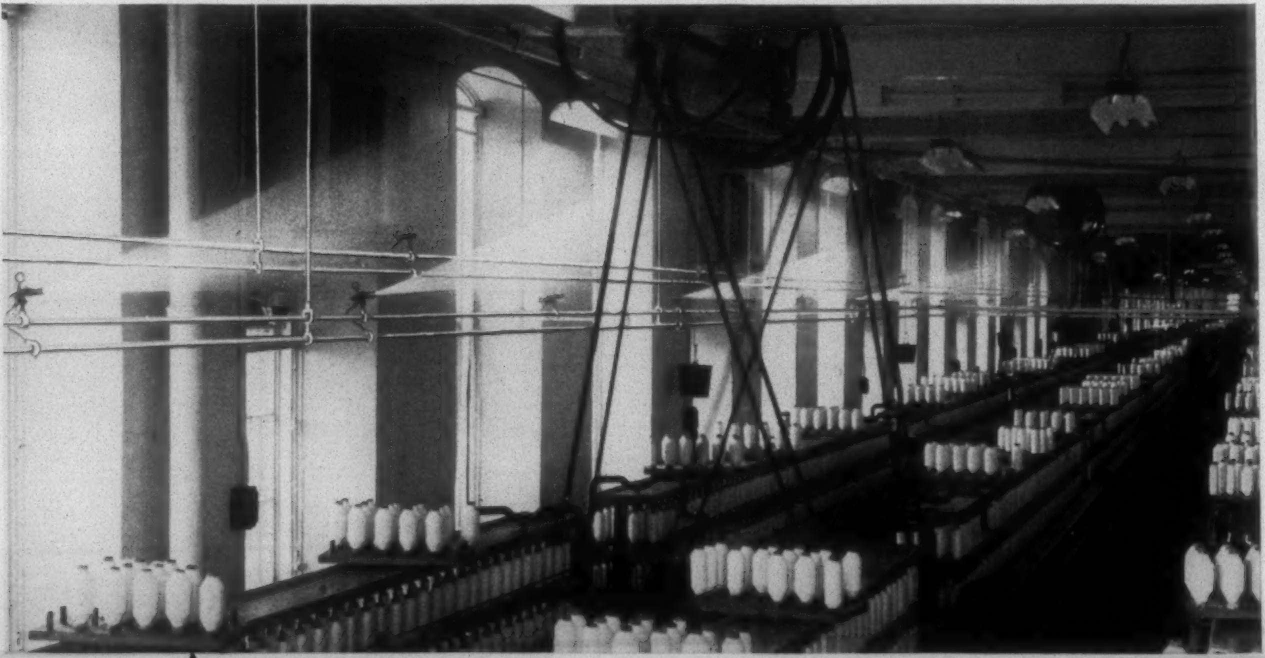
Ponemah already had humidification. The addition of AMCO Evaporative Cooling has proved a low-cost, practical way of meeting the excessive heat burden imposed by the spinning process. The results have been greater yarn strength, more efficient spinning, improved worker comfort.

AMCO Evaporative Cooling utilizes the humidification system to absorb the frictional heat of high speed machines in conjunction with carefully controlled airflow. No ducts or expensive alterations are needed. Installation can normally be made without serious interference with production.

Right now — see for yourself how quickly this system pays for itself with greater production, lower costs. An AMCO engineer will be glad to make a survey and submit recommendations for the exact system to meet the particular conditions and needs of your mill.

FEATURES OF AMCO HUMIDIFICATION AND COOLING

- ★ Reduces excessive temperature and holds relative humidity at point best suited to fibre and process.
- ★ Speeds production in high friction (heat) areas.
- ★ Assures evener yarn counts and increases breaking strength.
- ★ Gradually increases regain for good roving and consequent better spinning.
- ★ Drafting of fibres smoother and more compact.
- ★ Waste and fly greatly reduced.
- ★ No cumbersome ducts to require cleaning and obstruct light.
- ★ Easier to install — minimum disruption.
- ★ High flexibility to meet changing room conditions.
- ★ Minimum maintenance.
- ★ Amco Evaporative Cooling utilizes your present humidification system.
- ★ Increases worker comfort.



AMCO **HUMIDIFICATION and COOLING**

AMERICAN MOISTENING CO. AFFILIATED WITH GRINNELL COMPANY, INC. PROVIDENCE, R. I. · BOSTON · ATLANTA · CHARLOTTE

Measure Pick-Counter Value

by all these Vantage Points of

VEEDER-ROOT *2-3* PICK COUNTERS

Reset and Non-Reset

1 QUICK CONVERTIBILITY:
Right in your own mill, your own men can do the job of converting Veeder-Root Pick Counters from 2 to 3-shift operation . . . by adding the 3rd counting unit as shown below at right.

2 YALE LOCK ON FRONT DOOR:
Only the authorized key-holder can clear the readings by resetting.

3 COMPRESSION-CLAMP DRIVE:
Save time and money in installation of 2-3 Counters. *No need to drill shaft.*

4 NEW WHEELS GIVE STRENGTH WITH LOW WEIGHT

5 NEW WHEELS RESIST OVER-THROWING

6 EASY RESETTING KNOBS:
Large, smooth-surfaced, and patterned to fit the fingers, these streamlined knobs are quicker and easier to reset.

7 "BQ" COUNTER BRACKET:
Eliminates thrust to counter drive-shaft . . . eliminates need to support worm housing.

8 CONVENIENT COUNTER CARD:
Enables you to keep constant check on production efficiency.

9 BOLD VISIBILITY:
Large, lithographed figures . . . *not sunken,* but right up on the surface of the wheel, for easier reading.

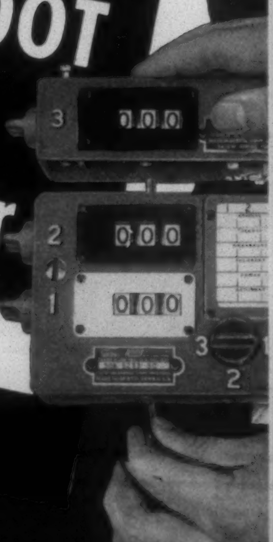
10 STEEL MOUNTING INSERTS:
4 heavy steel mounting inserts for extra strength to withstand loom vibration.

11 ALL METAL PARTS TREATED AGAINST CORROSION:
Greater protection against high weave-room humidity.

12 COMPLETE INSTALLATION:
All necessary parts and equipment are supplied.

VEEDER-ROOT
2-3
Pick Counter

Quickly Convertible from 2 to 3-Shift Operation
. . . Right in Your Mill



VEEDER-ROOT INC.
HARTFORD 2, CONN., GREENVILLE, S. C.

—LOOMS BIG

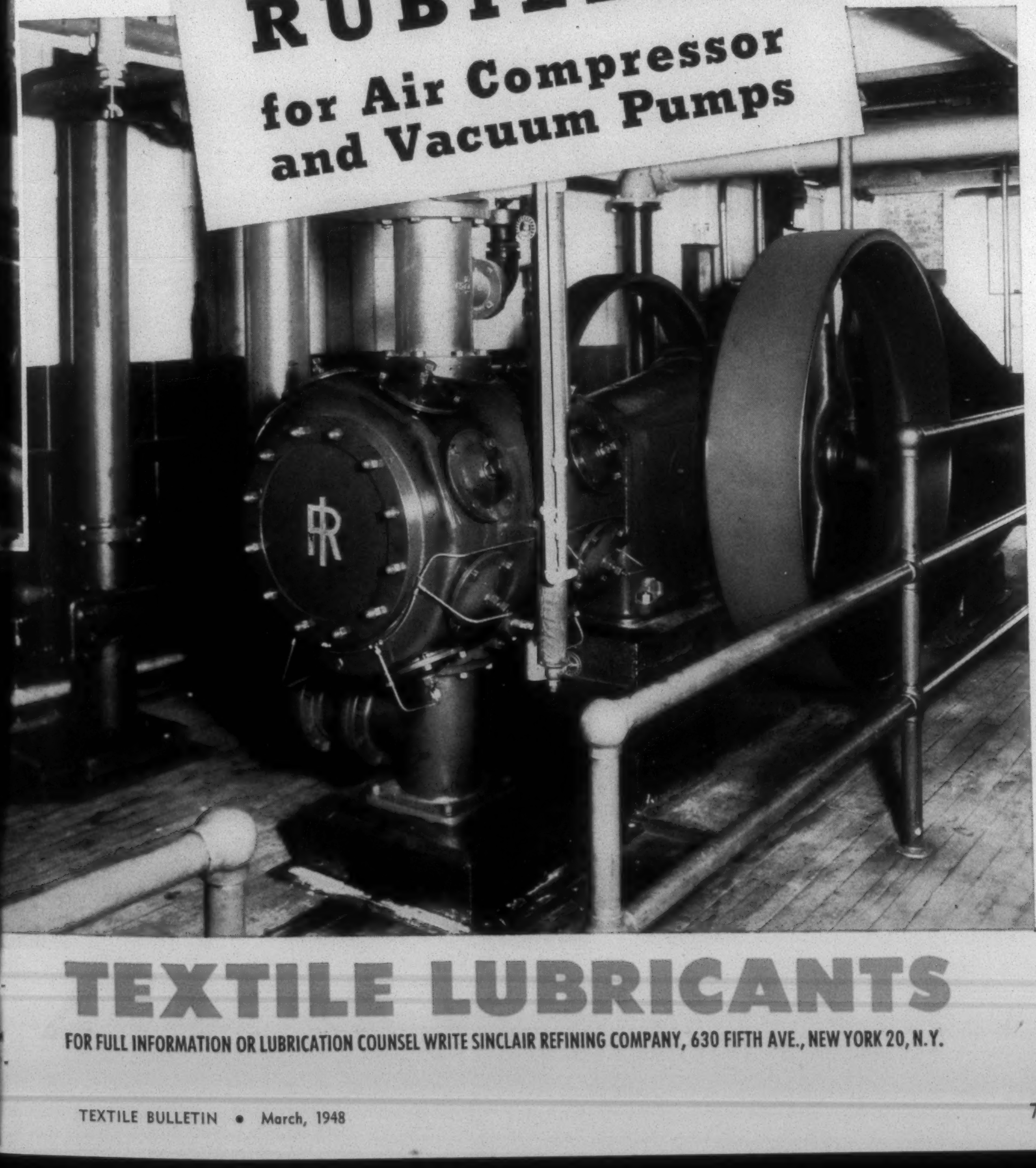
When "work" runs bad—when production is cut because of "pick-outs" and the percent of "seconds" is on the increase, look behind the looms. Lack of air for "blow-down" between beam doffs and during "scheduled cleaning" periods because of air compressor or vacuum pump failure often lowers quality and production. Correct lubricants best assure unfailing performance.

A long history of satisfactory performance lies behind the use of RUBILENE OIL for the lubrication of textile mill auxiliary equipment. Its fine qualities make it first choice for this important job of lubricating heavy-duty air compressors and vacuum pumps. Let us advise you on the correct grades of RUBILENE for your specific installations.

SINCLAIR

BEHIND THE LOOMS

SINCLAIR
RUBILENE
for Air Compressor
and Vacuum Pumps



TEXTILE LUBRICANTS

FOR FULL INFORMATION OR LUBRICATION COUNSEL WRITE SINCLAIR REFINING COMPANY, 630 FIFTH AVE., NEW YORK 20, N.Y.

H & B RUBBE

A Typical Installation

The Achievement

Here at the Kanmak Mills in Kulpmont, Pennsylvania, H & B Rubber Covering Machines are used to produce covered rubber yarn of accurately measured, fully controlled elongation and balance. This quality yarn is then used by Kanmak to make quality foundation garments; it's the quality that sells.

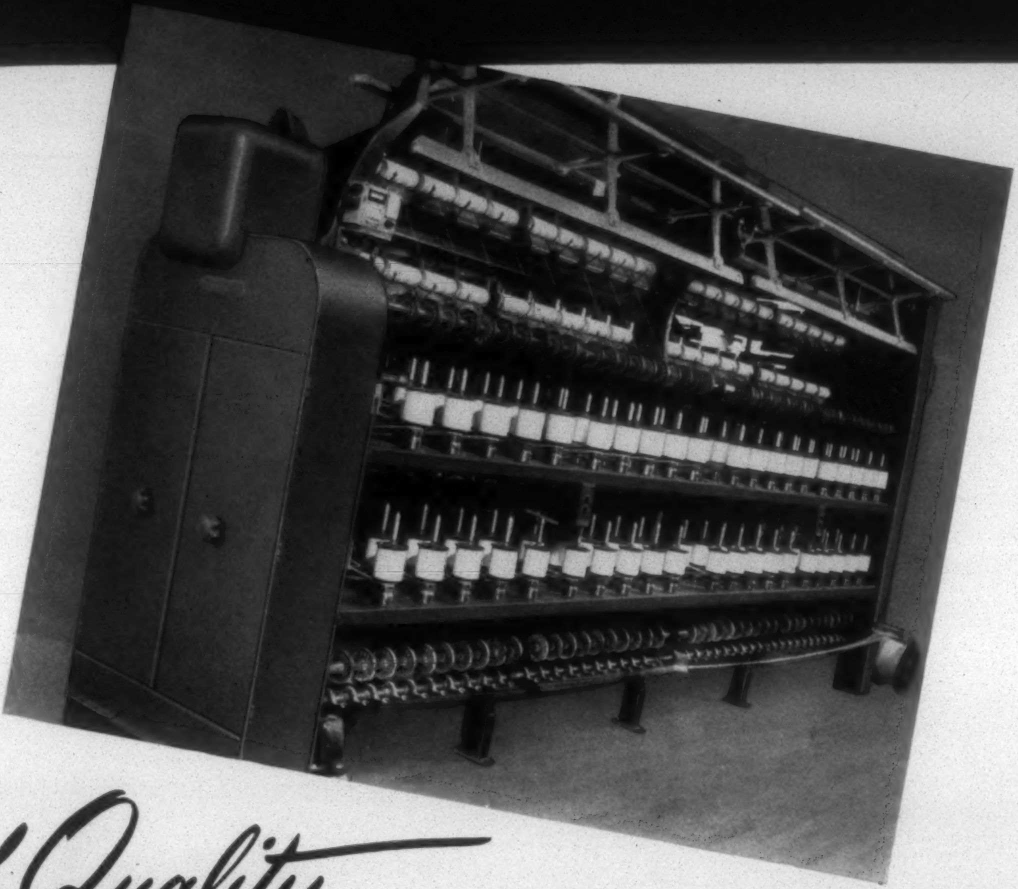
This emphasis on quality is typical of H & B textile machinery in general, and the prime reason for its growing popularity. Under the following close-up photograph of one of our Rubber Covering Machines at Kanmak is an imposing list of some of the features of this equipment, designed for the *achievement of quality.*

H & B AMERICAN

Builders of Modern

FACTORY, EXECUTIVE OFFICES AND EXPORT

COVERING MACHINES



of Quality

- Individual motor drive.
- All gears readily accessible and totally enclosed in head end.
- Variable elongation drive totally enclosed in head end.
- Ball bearing spindles.
- Variable upper spindle drive totally enclosed in foot end.
- Specially selected hardwood reels with aluminum arms.
- Cast iron spindle rails with rugged flanges.
- Rigid overall construction.
- Adjusting shoes on ends and samsons for easy leveling.

INSTALLATION STATISTICS
for a 40-End Machine

Overall floor space	14′ x 5″ x 30″
Overall height from floor	6′ 2″
Horsepower required	5 H.P. motor
Total spindles	80
Regular size reel	54″
Net weight	3500 lbs.
Shipping weight	3800 lbs.

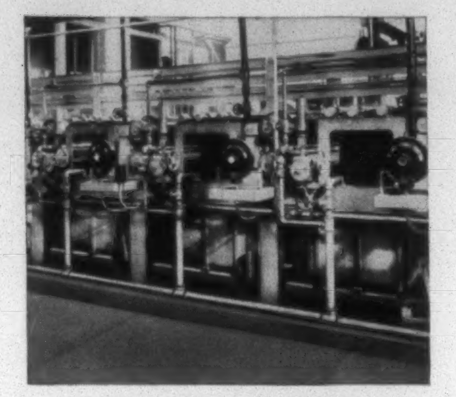
MACHINE CO.

Textile Machinery

DIVISION PAWTUCKET, RHODE ISLAND, U. S. A.

BRANCH OFFICES
ATLANTA, GA.
815 CITIZENS AND SOUTHERN
NATIONAL BANK BUILDING
CHARLOTTE, N. C.
1201 JOHNSTON BUILDING

HOW THESE OPERATIONS CAN SOLVE THESE PROBLEMS FOR YOU



SOAPING VAT COLORS

1. Removing excess and lightly attached dye-stuff.

2. Getting clear, bright colors that will not rub off.

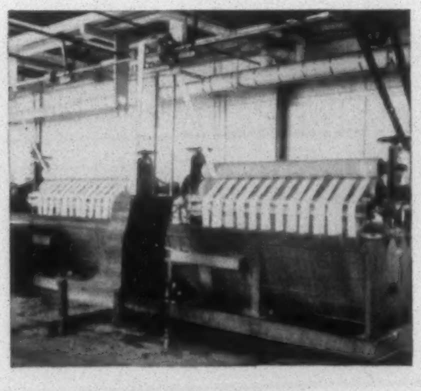
Mere soaping alone isn't the answer to these two problems. It takes a *good soaping* with Armour's FLINT CHIPS to remove excess dye-stuff, clear the whites, brighten the colors. Since maximum soaping results are attained at about 180°-190° F., high titer FLINT is ideal. Besides, you get a thorough boil with FLINT, because it stays active even under steam. Results—sparkling, clean cottons!

FULLING, SCOURING REWORKED WOOL

1. Fulling and cleaning the wool in a minimum amount of time.

2. Obtaining a clean, clear-looking piece of fulled cloth.

For really successful fulling and scouring it takes Armour's TEXSCOUR Soap. TEXSCOUR, a red oil base soap in flake form, affords superior wetting and penetrating properties. At the same time, it has enough *body* for the fulling job. Good scouring must be done at low temperatures to keep the wool from felting and shrinking. That's why 8-12° titer TEXSCOUR cleans up fibres, leaves wool soft and resilient.



DESIZING COTTON

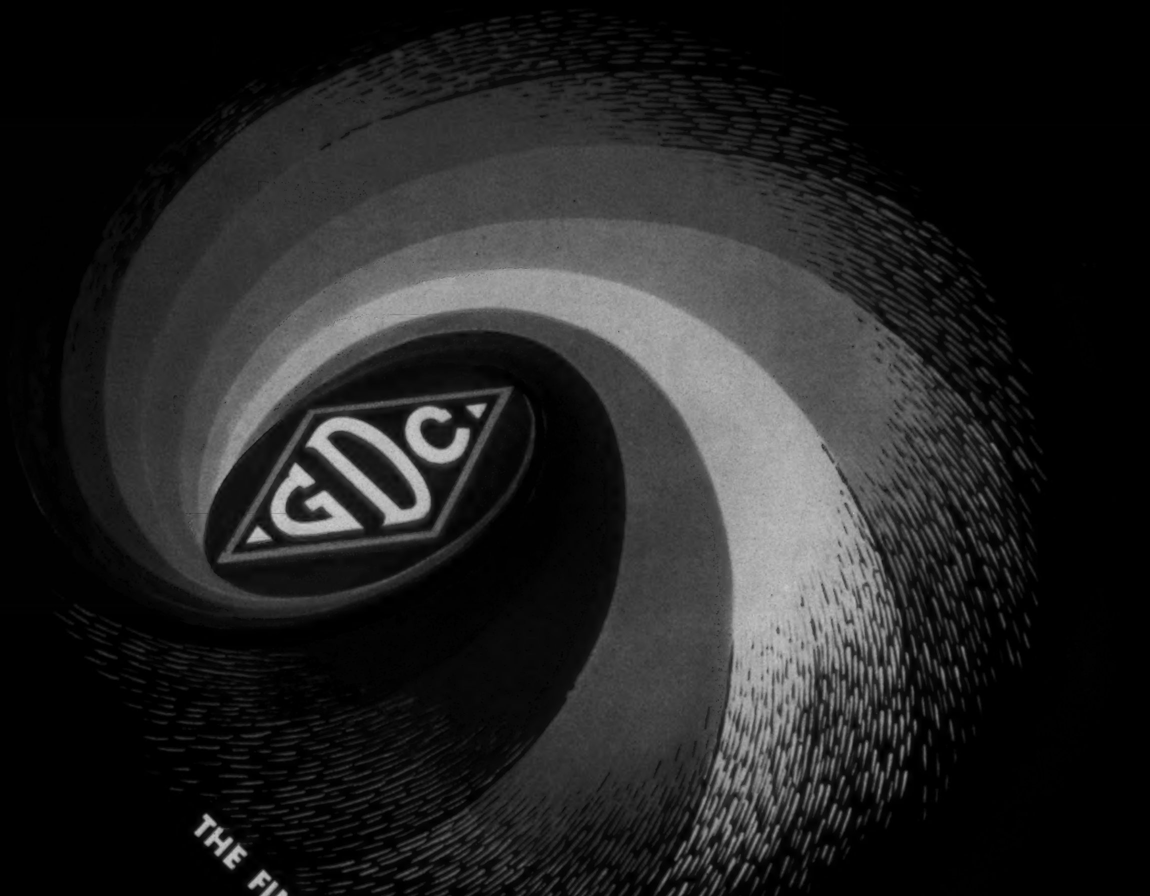
1. Freeing cotton goods from sizing, prior to dyeing.

2. Avoiding spotty dyeing and uneven shades to secure a uniform finish.

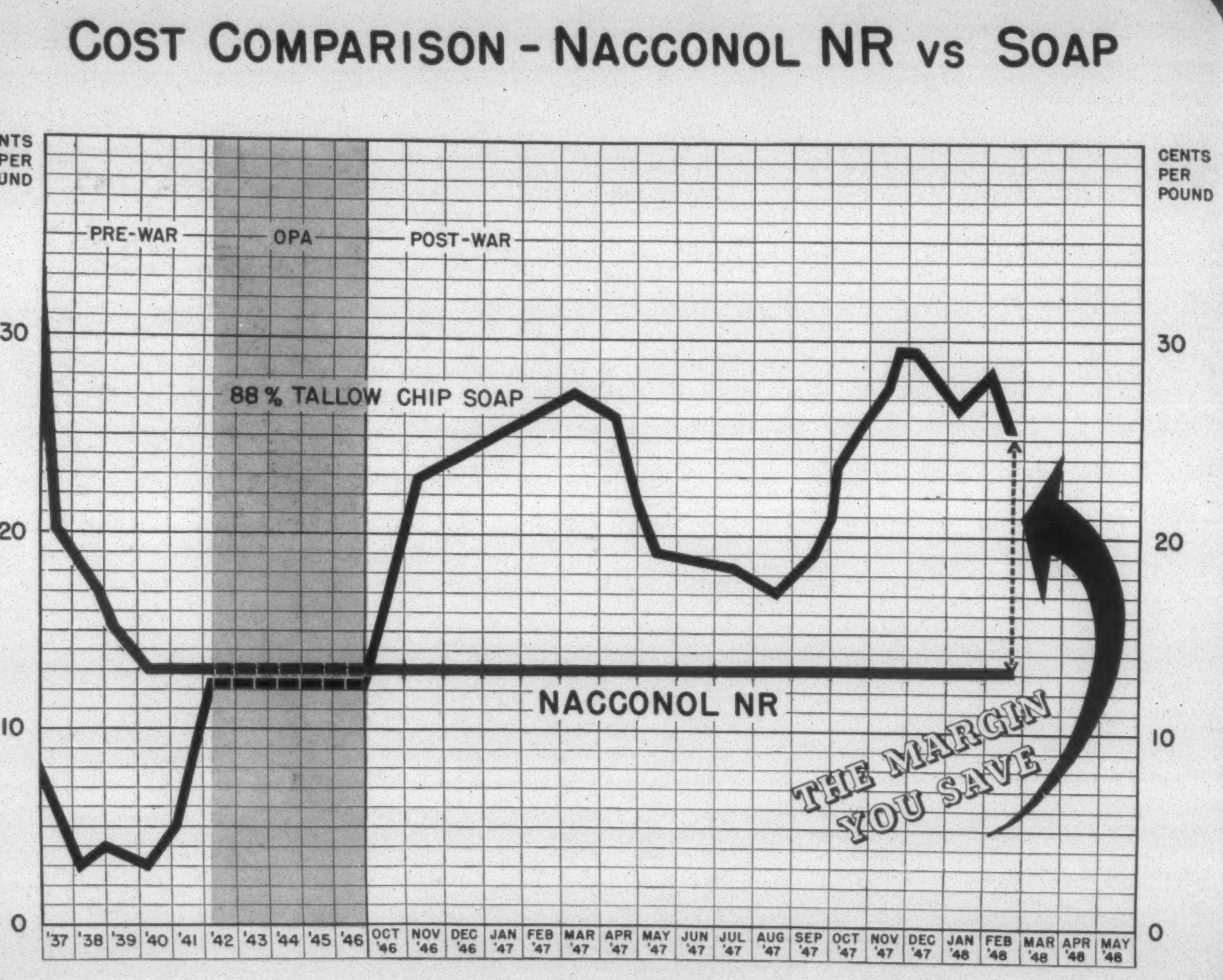
In desizing cotton, you need high wetting and penetrating properties rather than high detergency—a synthetic rather than a soap. The best solution to your problems is Armour's REGAL Synthetic Detergent. REGAL is a modern all-purpose synthetic that is readily soluble in cold or hot, soft or hard water. It rinses quickly and freely without insoluble deposit. Because of its swift penetration rate, REGAL reduces the time required for desizing operations, yet finished goods are free from sizing and permit level, uniform dyeing.

Remember, There are Armour Soaps and Synthetic Detergents to Solve All Your Textile Problems

ARMOUR and Company
Industrial Soap Division
1355 WEST 31ST STREET • CHICAGO 9, ILLINOIS


GDC
THE FINEST AND MOST DURABLE DYESTUFFS KNOWN
General Dyestuff Corporation

Pictures Speak Louder Than Words



Adopt **NACCONOL NR**
and cut your soap costs

National Aniline DIVISION • ALLIED CHEMICAL & DYE CORPORATION
40 RECTOR ST., NEW YORK 6, N.Y. • BOSTON • PROVIDENCE • PHILADELPHIA • CHICAGO • SAN FRANCISCO • PORTLAND, ORE.
GREENSBORO • CHARLOTTE • ATLANTA • NEW ORLEANS • CHATTANOOGA • TORONTO

Announcing . . .

THE IMPROVED

PATERSON TENSION SHUTTLE

for Shuttle-changing or Box Looms

New!

LEVELING DEVICE

Spindle head, completely redesigned and constructed, permits accurate alignment by turning leveling screw with slot provided in shank. Lock nut maintains setting. Eliminates any need for bending spindle by hand with possibility of breakage or damage to top spring. Slot head design makes spindle change easy.

New!

METAL HEAD BOX

Heavy steel box holds spindle head rigidly in place, prevents side play. Provides solid base for leveling screw. No part of spindle head contacts wood. Assures lasting, positive alignment.

New!

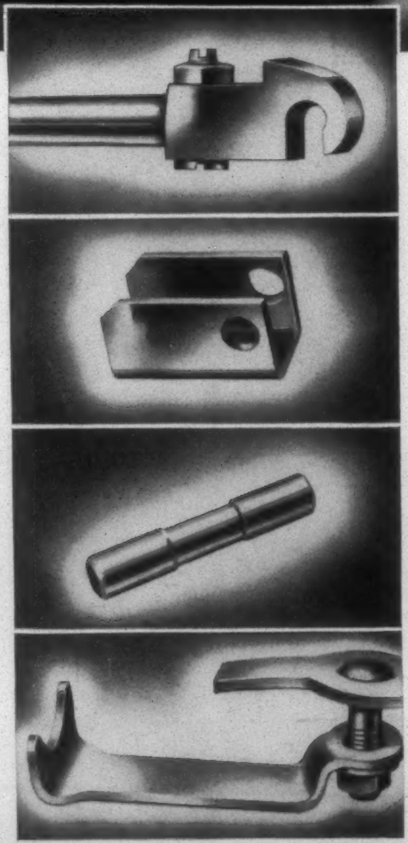
SPINDLE HEAD PIN

Double shouldered steel pin, shaped so it can't work out through front or back wall of shuttle. Avoids danger of reed spoilage or "smashes" from "break outs". A patented feature!

New!

INTERCHANGEABLE CATCH

Shuttle can be assembled with either long catch, to fit a wooden bobbin, or short one for paper tube. Parts interchangeable. Operation requires less than two minutes. Provides positive fit.



NOW, with four tested improvements in mechanical design, this U S Paterson Tension Shuttle will help to eliminate "smashes" and "seconds", and reduce excessive shuttle maintenance costs.

Once again, U S matches progress in loom design with progress in shuttle design, giving you proved new features that assure greater efficiency, increased production, and fabric quality protection.

Check over these time-saving, money-saving advantages. A U S representative will show you the improved Paterson Tension Shuttle at your request. See it, try it, before you place your next shuttle order!

US BOBBIN & SHUTTLE CO.

PROVIDENCE, R. I.
GREENVILLE, S. C.

LAWRENCE, MASS.

JOHNSON CITY, TENN.
CHARLOTTE, N. C.

CHICAGO REPRESENTATIVE:
Albert R. Breen
80 E. Jackson Blvd.

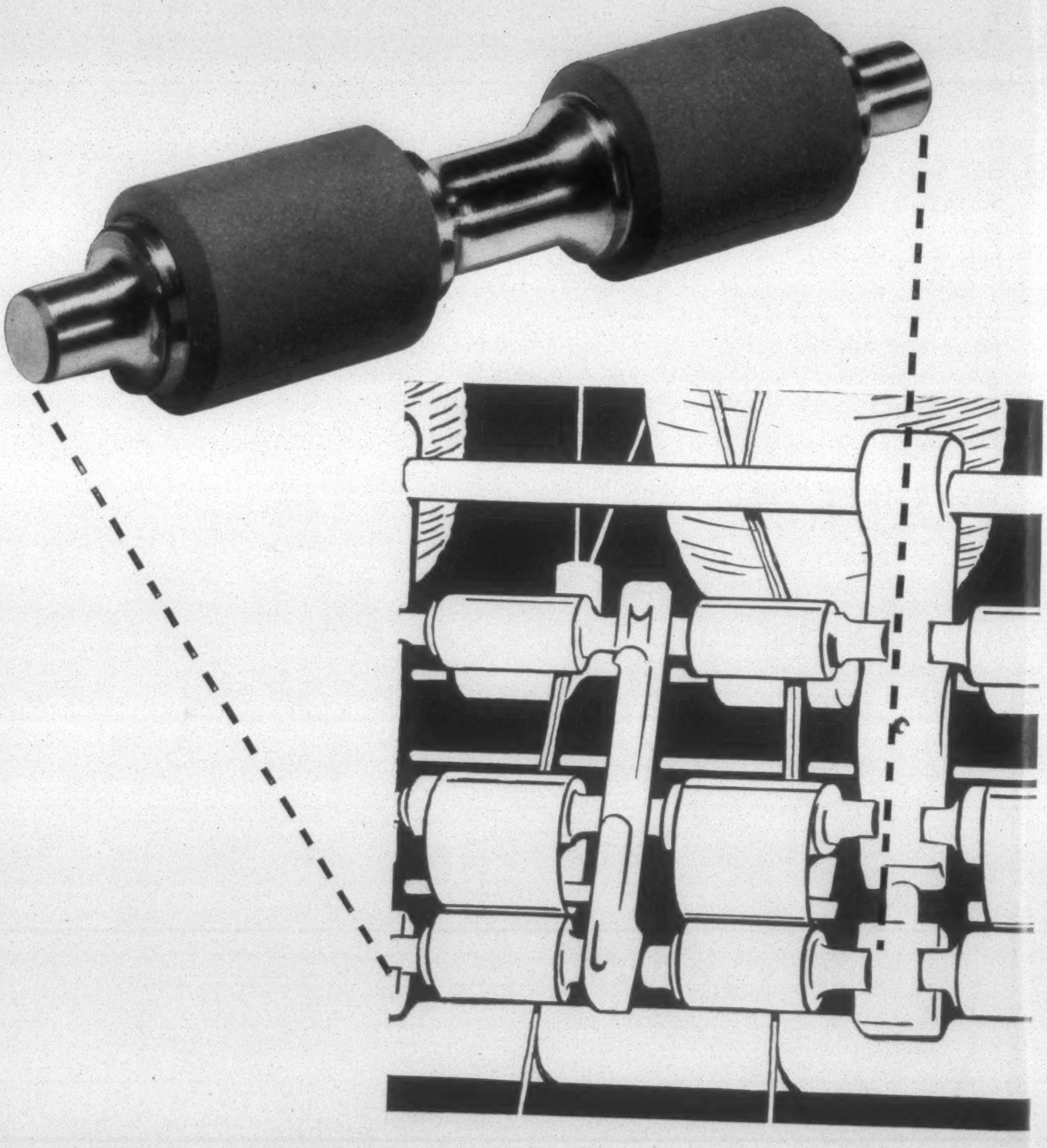
CANADIAN REPRESENTATIVE:
W. J. Westaway
Montreal, Que.—Hamilton, Ont.

ALABAMA REPRESENTATIVE:
Young & Vann Supply Co.
Birmingham

THE SEAL OF QUALITY AND SERVICE SINCE 1857

ESTABLISHED 1857

ACCOTEX COTS draft



ARMSTRONG'S ACCOTEX COTS

better because they resist slicking

YOU can count on better fiber control when you run on Armstrong's NC-727 Accotex Cots. That's because the synthetic rubber in this Accotex Cot is scientifically compounded with cork. The high friction cork helps grip the fiber firmly and evenly. Slicking is retarded. This long-lasting grip gives you more uniform drafting and higher quality yarn.

Besides drafting better, Accotex Cots offer all these important advantages:

LONG SERVICE—Accotex NC-727 Cots are tough. And they can be rebuffed at least five or six times.

REDUCED EYEBROWING—The resistance to slicking minimizes eyebrowing.

REDUCED LAPPING—Accotex NC-727 Cots have little affinity for textile fibers and are non-sweating even in humid weather.

GOOD START-UP—Accotex NC-727 Cots are non-thermoplastic and resist flattening.

SOLVENT RESISTANCE—Accotex NC-727 Cots are not affected by oil, water, dyes, or commonly used textile solvents.

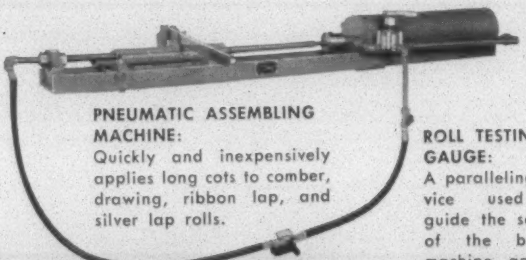
SEAMLESS CONSTRUCTION—Accotex NC-727 Cots have no seams, no structural weaknesses to cause failure in service.

QUICK ASSEMBLY—All Accotex Cots are ready glued for easier, quicker assembly.

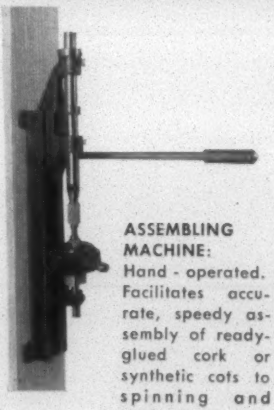
Put these superior cots on a test frame today. See why Armstrong's Accotex Cots now serve more spindles than any other roll covering. They are made in various compounds, with and without cork. Your Armstrong representative will help you choose the best type of Accotex Cot for your particular service. Call him today. Or write to Armstrong Cork Company, Textile Products Department, 8203 Arch St., Lancaster, Pennsylvania.

ROLL COVERING SERVICE THAT'S COMPLETE

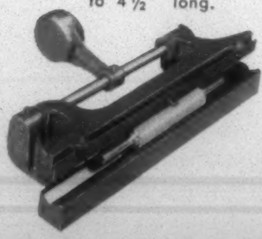
You can get everything you need for complete roll covering service from your Armstrong representative. He can supply not only all three modern types of covers but also the roll shop equipment required to apply and service them.



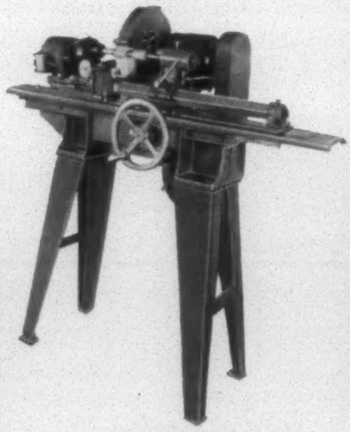
PNEUMATIC ASSEMBLING MACHINE: Quickly and inexpensively applies long cots to comber, drawing, ribbon lap, and silver lap rolls.



ASSEMBLING MACHINE: Hand - operated. Facilitates accurate, speedy assembly of ready-glued cork or synthetic cots to spinning and card room rolls. Handles cots up to 4½" long.



ROLL TESTING GAUGE: A paralleling device used to guide the setting of the buffing machine and to check trueness of rolls after they have been rebuffed.



BUFFING MACHINE: Precision-buffs all modern types of cots. Adjustable for all lengths and diameters of rolls ordinarily used.

CORK COTS
ACCOTEX APRONS
ROLL SHOP EQUIPMENT

BRAND-NEW "Beauty Parlor" FOR 857 MILES OF CLOTH A WEEK!

The most up-to-date textile bleachery and finishing plant in the country was recently put into operation by Pepperell Manufacturing Company at Pepperell, Alabama.

Over a million and a half yards of widely diversified fabrics can be processed by this finishing plant each week. *This immense capacity makes it possible for the plant to service the converting needs of outside customers, as well as those of Pepperell's own products.*

The newest textile-finishing machinery is employed throughout the plant. It is fully equipped for bleaching, dyeing, mercerizing and Sanforizing. All bleaching is done on efficient Du Pont continuous peroxide bleach ranges. Special treatments are available, such as durable and non-durable water-repellent finishes. Other new processes will be offered as they are developed.

Pepperell representatives will be glad to discuss the facilities of this new plant with interested companies. Inquiries should be addressed to Pepperell Manufacturing Company, Inc., 40 Worth Street, New York 13, N. Y.

Pepperell Manufacturing Company
160 State Street, Boston 2, Massachusetts

PEPPERELL
FABRICS
®

Pepperell's 6 Busy Plants

MILLS

BIDDEFORD, MAINE
FALL RIVER, MASS.
LINDALE, GEORGIA
PEPPERELL, ALABAMA

FINISHING PLANTS

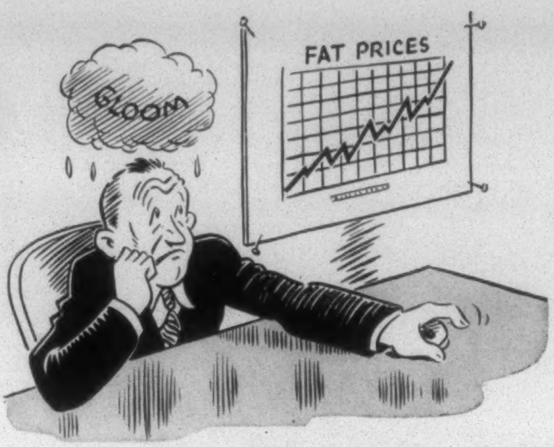
LEWISTON, MAINE
PEPPERELL, ALABAMA

THEY POUR FORTH A STEADY STREAM OF MUCH-NEEDED FABRICS:

Sheets · Pillowcases · Blankets Crib Blankets · Chambrays · Coverts Pinchecks · Whipcords · Flannels Marquisettes · Fabrics for Sportswear, Industry, Abrasives, Shoe Linings · Rayon Fabrics for Suit Linings and Women's Wear · Fine Fabric Finishes.

LOOMED FOR QUALITY — PRODUCED IN VOLUME

Why worry about unsettled prices of fats?



Here's a better size softener that includes no animal fats!

Developed two years ago when fats were so scarce, and since then proven in production, time after time, HOUGHTO-SIZE CW is a positive answer to your sizing problems.

It contains no animal fats, being formulated on an entirely new basis. And the sizing advantages it gives you will be surprising. To sum them up:

A one-piece size; nothing to add but starch and water . . . much lower kettle cost . . . greatly increased breaking strength . . . a free-running warp which won't stick to dry-cans . . . definitely improved weaving efficiency.

For first-hand proof, ask the Houghton Man to arrange for a demonstration, or write E. F. Houghton & Co., Philadelphia or Charlotte.

... use HOUGHTO-SIZE CW ... for cotton warps

Each pin in the map represents a mill where patented Hunt Spreaders are in use. More than 200 such installations have been made—often as many as 1,000 units in one mill.

SPREADERS

Recognition of Greater Loom Efficiency Through Spreader Installation is Industry-Wide

Installations of Hunt Spreaders have proved, in many of the industry's leading mills, that addition of Spreaders to looms, together with modernization, has effected startling increases in production—sometimes as much as *18% greater than when the looms were new.*

To supply the tremendous demand thus created for patented Hunt Spreaders, the plant and personnel at Hunt Machine Works have been expanded more than 1,000 per cent in the past few years.

The Hunt Spreader is no "Johnny-come-lately." For more than five years now, the Spreader principle has been tested and proven. Installations on looms provides stability, adds needed bearings to crankshaft and camshaft, and reduces destructive vibration. Increased speed is made possible. Maintenance costs are lowered.

The patented Hunt Spreader is, in cloth production, a *Proven Factor.*

Write for illustrated literature showing Hunt Spreaders in use.

HUNT MACHINE WORKS, INC.
SUCCESSORS TO
MOUNTAIN CITY FOUNDRY AND MACHINE CO. AND HUNT LOOM CO.
200 ACADEMY STREET TELEPHONE 200 GREENVILLE, SOUTH CAROLINA

long-life

*PIVOTAN

AMERICA'S FINEST LEATHER BELTING

*REGISTERED TRADENAME

Low-stretch, extra-grip, long-service PIVOTAN leather belts were developed through an exclusive Southern Belting process for greater production economy in textile mills. PIVOTAN gives super-performance. Write for additional information. Ask about our engineering service.

Southern Belting Company - Atlanta

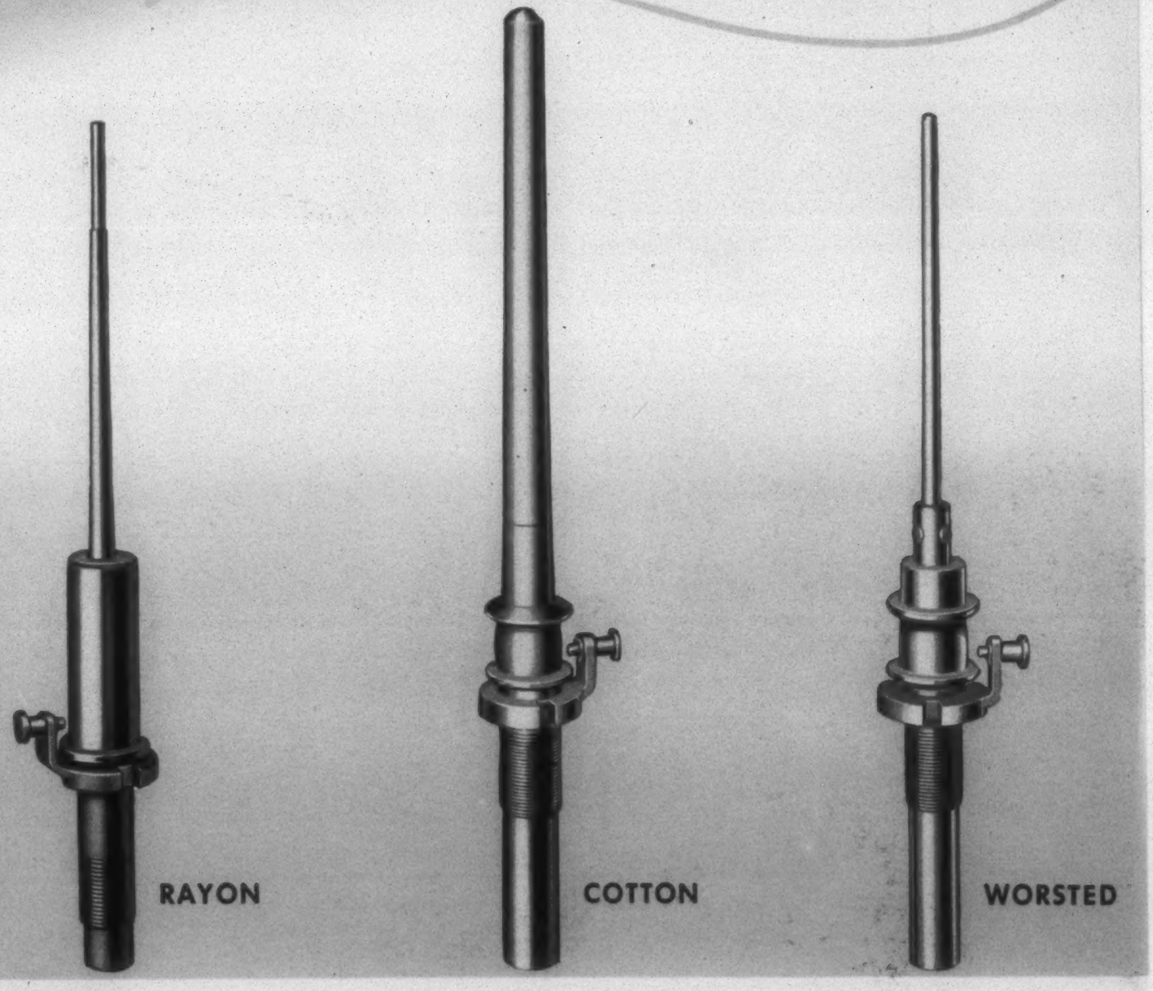
Manufacturers and Warehouse Distributors

Leather Belting
Rubber Belting
V-Belts and Sheaves
Fiber and Metal Pulleys
Rockwood-Southern Pivoted Motor Drives
Westinghouse Motors

1,000,000 Marquette

ROLLER BEARING SPINDLES

. . . NOW IN OPERATION



Write for illustrated catalog

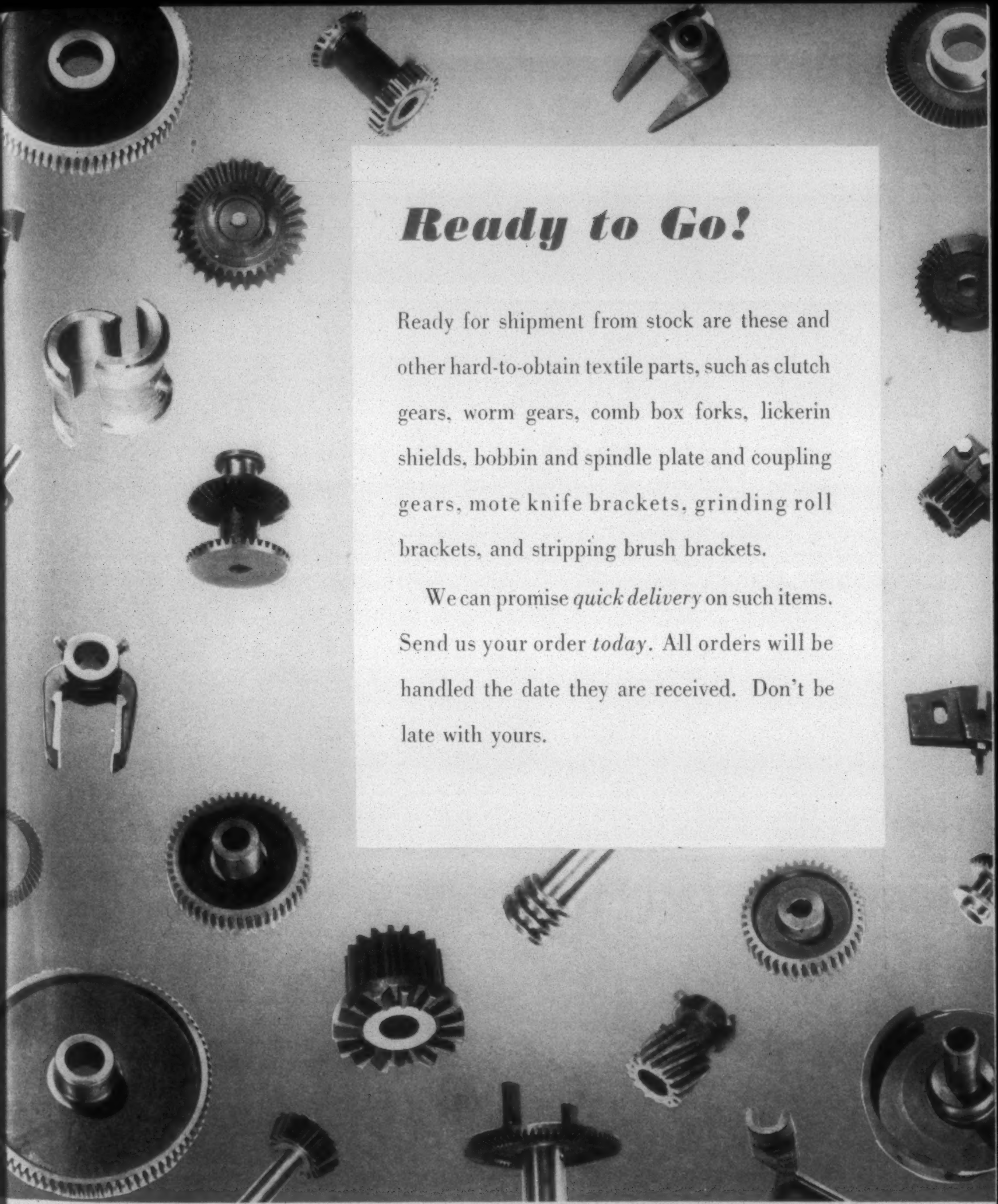
The Marquette METAL PRODUCTS CO.

CLEVELAND 10, OHIO

SUBSIDIARY OF CURTISS-WRIGHT CORPORATION

Also Manufacturers of: HYDRAULIC GOVERNORS • FUEL OIL PUMPS
WINDSHIELD WIPERS FOR AIRCRAFT, TRUCKS AND BUSES
FUEL OIL INJECTORS • PRECISION PARTS AND ASSEMBLIES

BYRD MILLER, WOODSIDE BLDG., GREENVILLE, S. C. - WILLIAM P. RUSSELL, BOX 778, ATLANTA, GA.



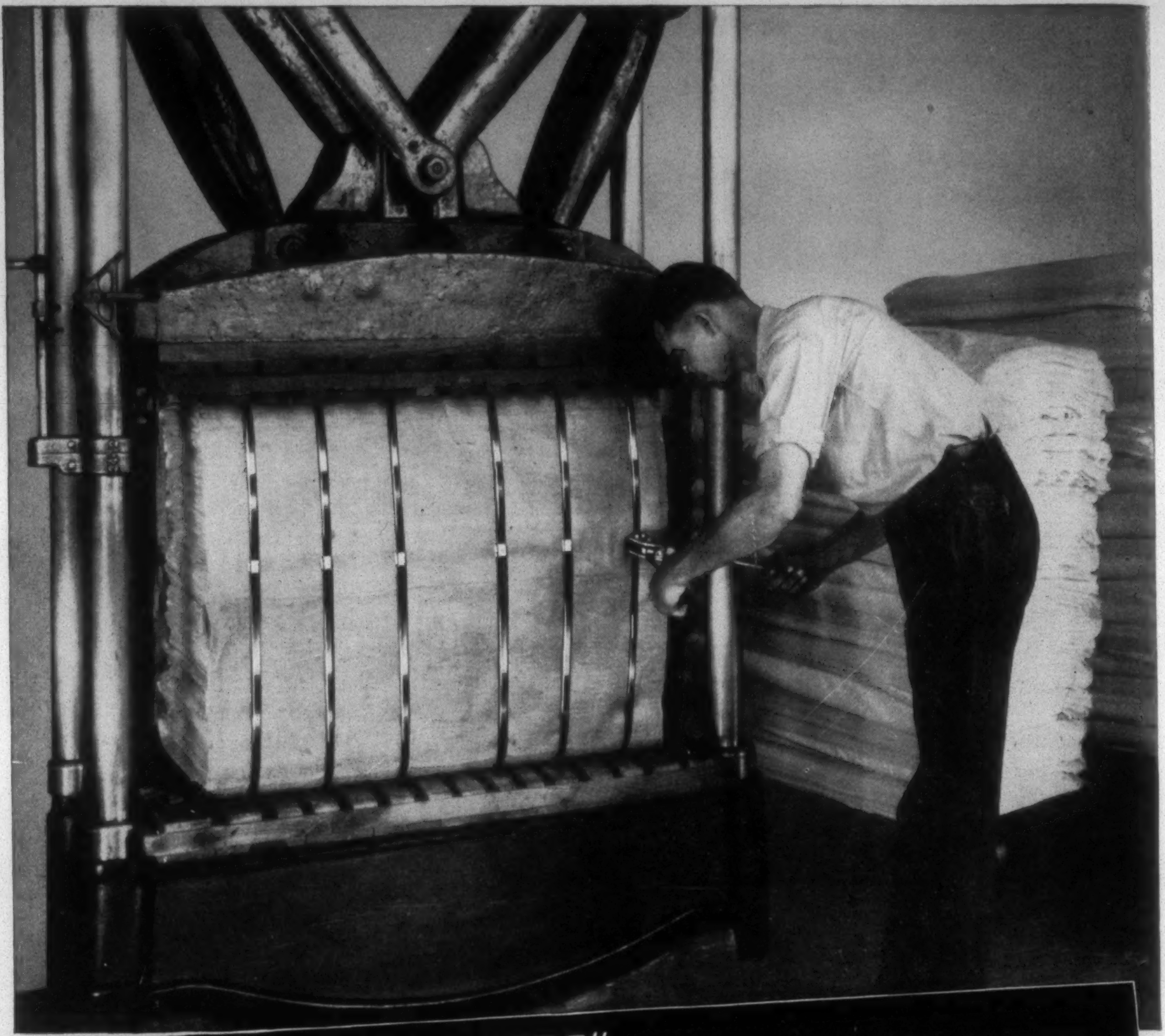
Ready to Go!

Ready for shipment from stock are these and other hard-to-obtain textile parts, such as clutch gears, worm gears, comb box forks, lickerin shields, bobbin and spindle plate and coupling gears, mote knife brackets, grinding roll brackets, and stripping brush brackets.

We can promise *quick delivery* on such items. Send us your order *today*. All orders will be handled the date they are received. Don't be late with yours.

Southern States SS **Equipment Corp.**
HOME OFFICE AND FACTORY HAMPTON, GEORGIA

HENDERSON FOUNDRY & MACHINE COMPANY DIVISION
Largest Manufacturer of Cast-Tooth and Cut-Tooth Gears in the South



"BOUND TO GET THERE"

Boxed, Bundled or Baled!

. . . WITH *Acme Steelstrap*

Doc. *Steelstrap*

No matter how your textile product goes, it will move more secure against everyday shipping hazards when banded with Acme Steelstrap.

You save, too, on warehousing space, shipping weight, dunnage, freight claims . . . and profits rise proportionately.

So, whether your textile shipments are single units, carloads of freight, or ships' cargoes . . . use Acme Steelstrap for boxing, bundling, or baling. It means the most efficient shipping pack.

NEW YORK 17 ATLANTA CHICAGO 8 LOS ANGELES 11

Acme Steelstrap

ACME STEEL CO.
CHICAGO

"Finest fruit I've growed in 40 years—"
This box proves it. And don't forget keeping these apples cold keeps the flavor best.
John Toms
"This fruit cost me a lot of care. Please help me get it to my friends like it should."
John Toms
"Keep 'em ... that's ...
John Toms
FLAVOR RIDGE
SHIPMAN, VIRGINIA
"Finest fruit I've growed in 40 years—" John Toms

(packaged in OLD DOMINION corrugated cartons)

Yes, and such fine fruit deserves to be packaged in boxes that will deliver it in right-off-the-tree condition. That's why the John Toms Orchards at Flavor Ridge, Shipman, Virginia, who do top merchandising and delivering of flavor-fresh apples throughout the season, consulted Old Dominion in designing their package and merchandising scheme. From the penny post card that tells you the fruit is on its way to the colorful card enclosure that speaks with a real Southern accent, every part of the merchandising is as precisely planned as the corrugated box with its sleeve protector.

So, when planning your product merchandising, consult Old Dominion's experts. Old Dominion's eight Southern plants make all types of paper board containers, including set-up boxes, canisters, folding boxes, corrugated containers and acetate packages. Send for General Line Folder No. 91.

OLD DOMINION Box Company Inc.

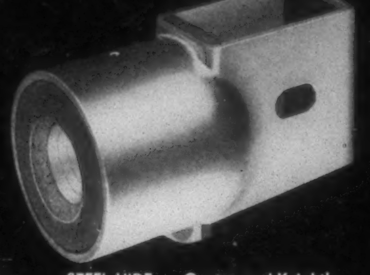
PLANTS LOCATED THROUGHOUT THE SOUTH

CHARLOTTE, N. CAROLINA

THE SOUTHERN BOX MAKER WITH A NATIONAL REPUTATION

GRATON
AND
KNIGHT

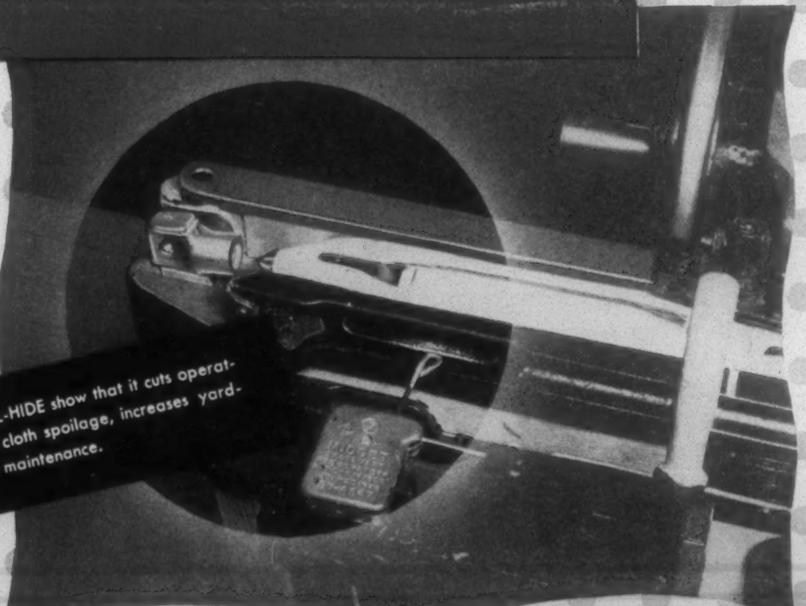
STEEL-HIDE



STEEL-HIDE . . . Graton and Knight's amazing new picker that combines long life with smooth performance.

"The Greatest Picker Development in Decades

You get more picks per picker dollar with Graton and Knight's amazing new STEEL-HIDE picker"



Loom tests of STEEL-HIDE show that it cuts operating costs, reduces cloth spoilage, increases yardage and reduces maintenance.

Here's what STEEL-HIDE can do for you:

1. CUT OPERATING COSTS . . .

because STEEL-HIDE combines longer life with smoother operation. Shock absorption is tremendously improved . . . rebound eliminated . . . laminated leather nose tailored to type of work: soft for quality rayon — hard rawhide for high speed cotton looms. Nose is accurately drilled to receive shuttle spur. Boxing problems are greatly reduced. STEEL-HIDE is interchangeable right and left hand . . . inventory is cut to a minimum.

2. REDUCE CLOTH SPOILAGE . . .

because picker maintains true alignment on stick due to patented loop construction*: leather cushion on front absorbs shocks — rubber cushion on back insures snug fit — steel lip prevents rocking.

3. INCREASE YARDAGE . . .

because exclusive steel-and-leather construction gives longer loom service . . . fewer shutdowns. Heavy gauge steel sheath gives extra strength . . . leather gives perfect resiliency.

4. REDUCE MAINTENANCE . . .

because all parts associated with picker action last longer. Stick breakage is reduced . . . shoe wear is reduced.

*Pat. No. 2435748—Feb. 10, 1948

Here's *why* STEEL-HIDE gives outstanding performance:

A Graton and Knight survey among mill superintendents showed that improved picker performance ranked high on their list of "wants". Graton and Knight's research staff then set out to develop a picker that would meet mill men's desired specifications. The result is the amazing new STEEL-HIDE. STEEL-HIDE'S patented loop construction holds it in rigid alignment on the stick. It is leather cushioned on the front for maximum resistance to impact . . . rubber lined at the back to insure a snug fit. STEEL-HIDE can't work loose, twist on the stick or rock.

The rugged, steel-and-leather construction of STEEL-HIDE combines the strength of heavy gauge steel with the natural resiliency of leather. The laminated leather nose with accurately drilled hole is permanently bonded to the steel sheath, and gives perfect shock absorption . . . there's no rebound and the impact is fully cushioned . . . result: your boxing problems are lessened.

STEEL-HIDE . . . its longer life is locked in steel

STEEL-HIDE COSTS NO MORE!

You get more picks per picker dollar with STEEL-HIDE'S superior features and performance . . . the *best* will save you money.

LATEST ADDITION TO THE

GRATON AND KNIGHT

ORANGE LINE LOOM LEATHERS

A complete line manufactured by the world's largest manufacturer of industrial leathers

FREE! Test Sample of STEEL-HIDE

No Obligation IF YOU USE A 1" x 19/32" STICK . . . Mail this coupon and get a free test sample of the great new STEEL-HIDE picker. (Other sizes available soon.) Put STEEL-HIDE to the test on a high speed loom . . . watch it out-perform all other loop pickers. Put it on a rayon loom and watch the smoothness of its action. YOU BE THE JUDGE!

Specify: Loom Model.......... **Loom Width**.......... **Shuttle Width**..........

☐ **Narrow Nose** (for looms with narrow (15¾") shuttles, such as rayon looms)

☐ **Wide Nose** (for looms with wide (16½") shuttles such as cotton looms)

NAME..........

POSITION..........

COMPANY..........

ADDRESS..........

CITY.......... ZONE.......... STATE..........

GRATON AND KNIGHT COMPANY
328 FRANKLIN STREET, WORCESTER 4, MASS.

Are Your Ducks in these Rows?

MORE PRODUCTION

AT LESS COST

Here's how you can get lined up to meet present day requirements of volume textile production.

With the help of one of the South's oldest and most experienced sheet metal plants you can gear your preparatory machinery to modern competition. You can insure uninterupted production right from the start with precision made sheet metal parts. You can rely on quality products made and delivered with prompt dependable service. You can realize substantial savings.

Simply write,
wire or phone

GASTONIA TEXTILE SHEET METAL WORKS, Inc.
GASTONIA, NORTH CAROLINA

A SHEET METAL WORKS SERVING TEXTILE MILLS

Flotex FOR PRINTING

for extremely sharp outlines

FLOTEX adds sharpness of detail and brilliance of color to the *now* look—before it is fashioned from wool, cotton and rayon.

FLOTEX remains stable in the presence of acids and alkalies. It excels in printing Rapidogen, Indigosol, Napthol, Chrome, Acid and Basic colors on all types of fabrics. It also yields jet blacks with extremely sharp outlines.

FLOTEX is a colorless, clear-cooking thickener that serves as a replacement or extender for considerably more expensive Tragacanth, Locust Bean and other natural and synthetic gums for either roller machine or screen printing. It produces a high viscosity with low solids . . . deposits only a thin film on the cloth . . . and leaves the printed portion of even the sheerest of fabrics soft and pliable.

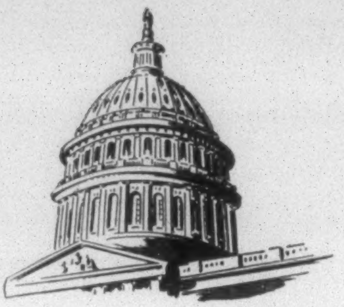
National also produces: **FIBERTEX** for finishing sheer cotton, rayon crepes and spun rayon blends; **AMBERTEX** a heavy-bodied thickener for white discharge and vat color printing; **VAT THICKENER 36** for vat colors on cotton and rayon; **TABLE ADHESIVE** for screen printing; **FLOCK ADHESIVE 970** for chenille flock printing.

Offices: 270 Madison Avenue, New York 16; Boston, Philadelphia, Atlanta, New Orleans, Indianapolis, Chicago, San Francisco and other principal cities. In Canada: Meredith, Simmons & Co., Ltd., Toronto, Vancouver and Montreal. In Holland: Nationale Zetmeelindustrie, N. V., Veendam.

Photo Courtesy of
INTERNATIONAL WOOL SECRETARIAT

National
STARCH PRODUCTS

STARCHES — AND SPECIALTIES WITH EASILY DEMONSTRATED SUPERIORITY



WATCHING WASHINGTON

[Exclusive and Timely News from the Nation's Capital]

Truman's alliance with Murray and C. I. O. is coming in for earth-rocking jolts from national party leaders, who see only disaster ahead for them in this year's election. They feel that, surrounded by a small group of jolly and inflated "yes-men," he does not realize how desperate has become the plight of the party and his chances to succeed himself. He appears to have irretrievably lost the South, and he's losing ground equally fast in the North. Prospects are the trouble will grow worse instead of better.

Big party leaders feel Truman's trouble is that he has come to put a blind, unthinking belief in Murray and the C. I. O., and their efficacy in "stopping Wallace," and winning in November, plus the smooth and soothing reassurances of John Steelman. They feel he's not only wrecked as a candidate, but probably wrecked the party's chances, too.

Even confirmed New Deal star-gazers are beginning to admit things couldn't be worse. They doubt if there's anything Truman can do to restore himself. Southerners say his irrevocable elimination is the price of any peace.

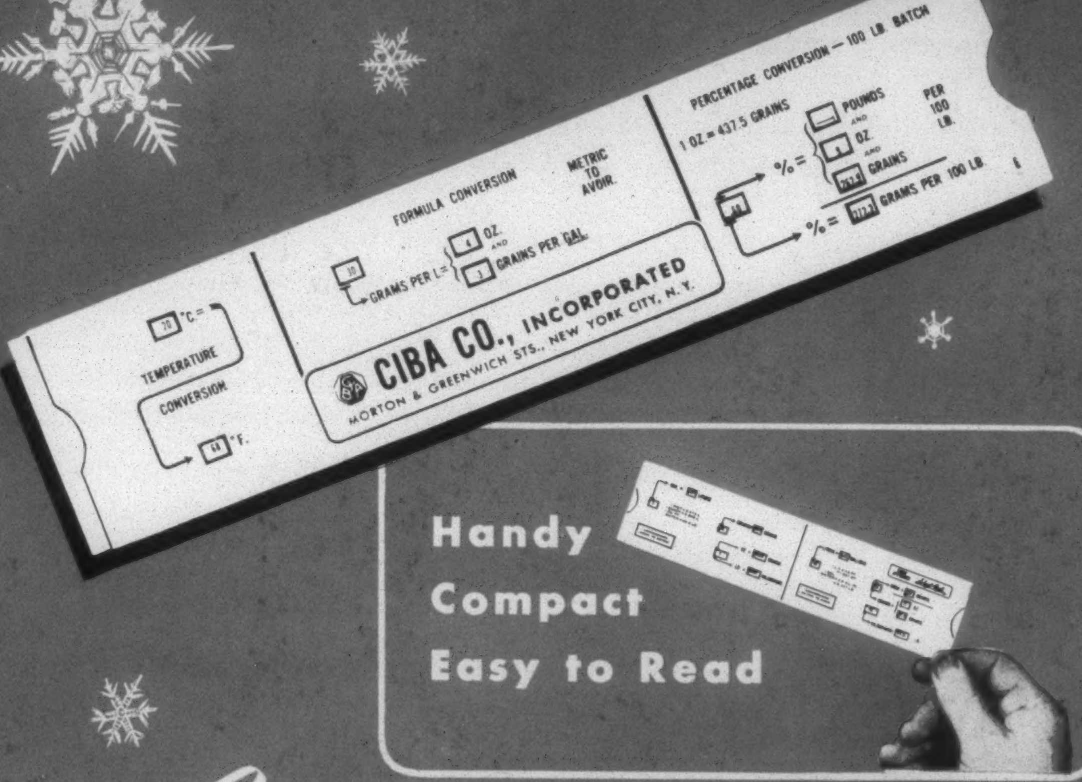
Very soon Southern governors are expected to make their "rebellion" formal and official. Amid speculations, the possibility of a coalition of Taft and Byrd obstinately persists. Tydings is coming in for consideration.

Truman is described by those who come into close contact as having become cock-sure, cold and ruthless in the sense of a big political machine boss. He complacently believes C. I. O. will pull him through in the big Northern cities, with no grasp of the misfortune that's overtaken him in the South. Even grim facts fail to get recognition; he doesn't want advice, and resents it when offered.

The bag of "civil rights" proposals, which has top place on the C. I. O. political agenda, is bogged down in Congress, with even Republicans trying to avoid touching them. Angry legislative partisans of Truman debate ditching him, or going ahead and taking a licking.

A revolution in the electoral system may be facing the nation. Only once since 1804 has election of a President devolved on the House. Three or more major parties this year might give a majority to no candidate, but throw the embroglio into the House. A presi-

Designed Especially For You-



Handy
Compact
Easy to Read

Ciba's NEW DYERS' Slyd-Rul

(Made of plastic)

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Another example of Ciba's technical service to make your job easier.

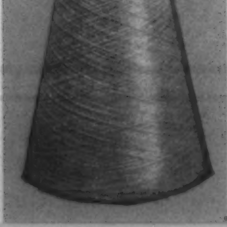
D Boone cilled a BAR…

When Dan'l Boone carved this record in Tennessee, it was not so much a tribute to his trusty gun as to the uncanny skill that made him a dead-eye shot with his primitive muzzle loader.

We've come a long way since the pioneer days of the cotton industry and its primitive techniques. But even modern machinery can't take the place of down-to-earth *know-how* and *skill*.

American Yarn has spent 27 years in carving its record of achievement in yarn spinning. Durene is a fine example of modern perfection in the handling of cotton yarn.

You'll mark up a record for consistent, superior quality in *your* product if you always specify *American* Durene.



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American Yarn & Processing Company

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Made of
Durene®
multi-ply mercerized combed cotton yarn
4 WAYS BETTER
than ordinary cotton yarns
EXTRA COMFORT
---more absorbent
EXTRA STRENGTH
---longer wear
EXTRA QUALITY
---lasting lustre
EXTRA SERVICE
---easy to wash
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dent might be any one of those getting a sizable electoral vote. Each state would have one vote in such selection.

In such contingency 25 states with fewer people than the 25 largest cities, and 15 of them with less than are in New York City, could elect a president. A coalition of small states or regions could take over control of government, and probably break up Congress into a group of blocs. Constitutional provisions for electing presidents by popular choice are geared to the two-party system.

Many states, especially in the South, are alarmed by the Federal Government's increasingly frequent invasion of their rights. Southern senators will pivot their "last ditch" battle with Truman on this line. They point to the Supreme Court's tidelands oil decision, giving federal title to tidal oil, as the largest breach in the dike.

Final tax revision bill reported out by the Senate Finance Committee may call for a reduction of $5 billion. Under House urging the committee has raised the cut by $1 billion. There's no doubt the House will over-ride a veto, with probably more votes than in passing the bill. Senate leaders are confident of like action.

Smooth functioning of the Taft-Hartley Law is described as "becoming increasingly a national wonder." Report of the Joint Congressional Committee March 15 shows in six months it is working well, beyond expectation, with N. L. R. B. snowed under in a mass of employer and union petitions, with both sides accepting its provisions, and that real joint level collective bargaining exists.

Chief instances where hardship has arisen under the law, the committee finds, is where unions have failed to file anti-Communist affidavits and financial statements, and have not qualified for the facilities available to unions under the law. They are not relieved of their obligations under the law, however.

C. I. O. will go ahead with its "third round" wage demands this year. Murray will start with his steel workers union. He's tied down by a rigid no-strike clause in the present contract, but there's no safeguard against slow-down strikes. One by one, Murray will take up industries with large back-logs of orders on their books.

RCA SOUND SYSTEMS

For Every Sound Amplification Purpose In Textile Mills,
Including Music and Communication.

For a survey of your plant by our sound engineer—write—

SOUTHERN RADIO CORPORATION

CAROLINA SOUND DISTRIBUTOR FOR RCA • CHARLOTTE, NORTH CAROLINA

the bulletin board

Questions, answers, comments and other material submitted by the readers for use in this column should be addressed to Editors, TEXTILE BULLETIN, P. O. Box 1225, Charlotte 1, N. C. All material will be edited properly before publication.

Our Readers Brag

Sirs:

For the first time I have seen a copy of your BULLETIN since I resigned from Saco-Lowell 18 years ago. It was then a weekly, and of course I read every word of it from its inception until 1930.

I cannot resist the impulse to write and congratulate you on the wonderful magazine which you now are publishing. I had no *idea* a textile magazine of such magnitude had evolved from the relatively small weekly paper as I knew it.

I always knew your paper had the goodwill, approval and backing of machinery people as well as cotton mill executives, but I cannot do less than express *amazement* at its growth and appearance. Certainly it has no peer.

Minnie G. Cranford
1008 Mt. Vernon Avenue
Charlotte, N. C.

Sirs:

Having been a reader of TEXTILE BULLETIN since it first was published, I cannot help but congratulate you on the monthly issue you are now getting out. The machinery advertisements and cuts are up to par . . .

J. V. McCombs
820 Lee Street
Asheboro, N. C.

Sirs:

I am pleased with the current issue of TEXTILE BULLETIN, which is now monthly instead of semi-monthly, and think the departmentalized sections are quite an improvement. Your editorials have almost always expressed my thoughts. . . .

Charles W. Alford
Lawrence Warehouse Co.
Charlotte 2, N. C.

¶ We appreciate these and other encouraging comments which have been received from our readers. Miss Cranford for many years was office manager for A. H. Washburn and Roger Davis when they were Southern representatives for Saco-Lowell Shops.—EDS.

Shrinkage Treatments

Sirs:

I have just read with interest the February issue of TEXTILE BULLETIN on Page 82 under the headline, "Recommend Resin Treatment Of Wool Fibers." This article discusses a luncheon meeting of the collateral group of the National Association of Wool Manufacturers in New York City, at which time Dr. Powers of Monsanto Chemical Co. discussed the application of resin for the treatment of wool to produce shrink-resistant treatments and I discussed the utilization of the chlorination process for the same purpose. The implication in the article is that I recommended the resin treatment, whereas I limited my discussion strictly to the chlorination process and want to keep this straight for the purposes of record.

Milton Harris
Harris Research Laboratories
1246 Taylor Street, N. W.
Washington 11, D. C.

¶ We are glad to clear up any confusion which may have been caused.—EDS.

Screen Printing

Sirs:

I am writing a technical text book, *Colors Techniques in Textile Printing.* I would like some glossy photographs to illustrate the chapter on screen printing. If you have any on file I would like permission to use them. I am chief research chemist for Burkart-Schier Chemical Co. here in Chattanooga.

Donald H. Gunther
Route 2, Box 781
East Chattanooga, Tenn.

¶ Sorry, a search of our files reveals no appropriate photographs. We suggest contacting one or several of the dyestuff firms. This magazine has never featured screen printing to any extent because of its manual nature. Perhaps more interest in it exists than we have realized; if readers request it, material of this type will be published from time to time.—EDS.

The Pinhook Story

Sirs:

Read your story about Pinhook Mill being the oldest mill [in Gaston County, N. C.] I have been told that the oldest cotton mill was down the South Fork River below Cramerton. I remember going down there with my late uncle, Charlie Fritt. He was born across South Fork River from Spencer Mountain and he told me when I was just a child about the mill on the South Fork below Armstrong Bridge. We went down there once and dug around and found an old spindle and flyer, but I have forgotten whether he said it was a spinning spindle and flyer or a twister. I wish you could get more information and write another story. The Pinhook article brought back memories. I used to know the Stowe brothers when I was a child. I have bought many a piece of candy at their store.

Speaking about cotton mills, my uncle was considered a good foreman of spinning and twisting rooms. He never worked at Pinhook. The first cotton mill he worked in was at McAdenville, N. C.; then he went to the old Gastonia Cotton Mill as second hand in the spinning room.

I hope I have given you some information in tracing the cotton mills of Gaston County.

John M. Johnson
Henderson, N. C.

Sirs:

Your article in the January issue of the BULLETIN on the Pinhook Mill is a very ably written history of this very important mill in the Southern cotton spinning industry and I certainly agree with every word of your first paragraph in that in after years this history should be complete and accurate. I congratulate you on this very fine write-up.

For your information I might mention that my brother was a sister of A. C. Lineberger, who first married Ceph Mason, who was a brother of Oscar Mason, the noted lawyer of Gaston County, and while Ceph Mason was superintendent of Pinhook my mother lived in a house near the mill. By the way, the water color picture from which your cut was made was the property of Ceph Mason and after the death of my mother a few years ago this picture was found among her effects. About ten years ago, desiring to have this picture kept in the direct Lineberger line I made a trip to Belmont and made Mr. Lineberger a present of this picture which he did not know was in existence. He was the happiest man that I think I ever saw, and we talked for more than an hour of its correctness.

The mention of George A. Gray was very timely and appropriate; however, he began his career as office boy and errand boy for the company store. C. J. Lineberger taught him to read and write and later A. C. Lineberger taught him some mathematics.

And for additional information, R. Y. McAden, though a carpetbagger, made an earnest effort, and was of financial aid, in trying to aid the mill stem the storm of failure.

The Mountain Island Mill antedated the Pinhook mill by about one year but the original mill was washed away after a few years of operation and was rebuilt about one mile from the original site.

A. C. Lineberger had an older half-brother, Lank Lineberger, who was also a superintendent of Pinhook for a period of time. Lank had three sons, all of whom were connected with the Southern Railway.

Also for your information, I was one of your first subscribers to TEXTILE BULLETIN, having taken a subscription, as I remember, before your first publication was out. I would like to have you send me about 12 copies of your January issue. There are several persons I would like to send these to.

R. Paul Clark, Agent
Sauquoit Plant
Standard-Coosa-Thatcher Co.
Gadsden, Ala.

Sirs:

I have read your account of the old Pinhook Mill with great interest, and I thank you for the pains you have taken to ferret out facts about that pioneer mill; and am especially interested in the stories by men who have worked in it, or know about it over years of their experience. You have told me much that I did not know; and there is very little that I can add, for I knew it only from the outside in early boyhood, and from what I learned from my kinsmen who had a part in it.

I have been prompted to prepare the enclosed little story about pioneers and pioneering in Gaston County, as I knew about them from my own associations over a long life in close touch or sharing in them. It is mostly concerned with persons of my own family, whose operations I knew about, or shared. I could not write about others, since I spent the years 1889-1924 in Massachusetts, and knew only what my own family were doing in that period. If this sketch of personalities, or any part of it, can be of any service to you in any way, I shall be glad.

James Lee Love
610 Fountain Place
Burlington, N. C.

¶ Mr. Love's article will be found in this issue, beginning on Page 39.—EDS.

More Information

Sirs:

In your February issue, Page 112, you have an article with reference to a Westinghouse maintenance check chart. We would appreciate securing this and will ask you to advise us just how we can proceed to obtain it.

H. Weiss
Double Woven Corp. of America
Dunmore, Pa.

¶ The chart may be secured from Westinghouse Technical Press, Westinghouse Electric Corp., East Pittsburgh, Pa., or, we presume, from any field representative of that firm.—EDS.

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A REALLY NEW ROLL COVERING MATERIAL

PAT. NO. 2,353,462

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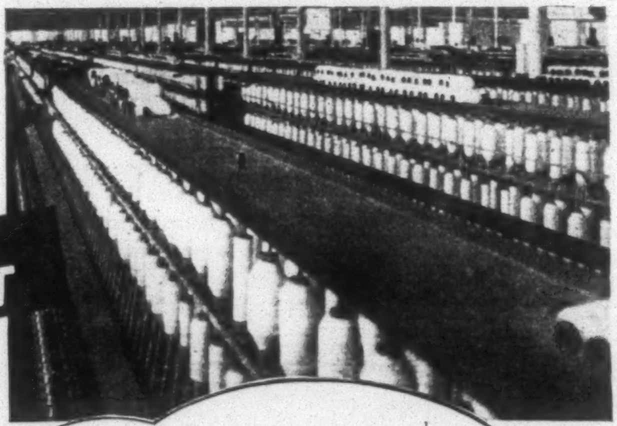
FROM TEST TUBE

"Duscot" is a completely new and improved roll covering scientifically discovered, developed and tested specifically for the textile industry by one of the largest and leading research laboratories.



TO TEST

A leading Southern mill says:

"This is the best cot we have ever used. Our ends down have been reduced to the extent that we need 2 men less per shift in the Spinning Room and 2 employees less per shift in the Spooling operation. This is due to the fact that the yarn does not show so many breaks and fewer ends are required to be tied."

And another mill writes:

"This is the nearest approach to a perfect cot in synthetics that has been developed."

And a recent random survey showed: That 13 additional mills conducting tests were so pleased with these cots that they were extending their use of "Duscot" to drawing frames and card room frames.

TO YOU

"DUSCOT" means MORE PRODUCTION AT LESS COST

W. D. DODENHOFF CO., Inc.
GREENVILLE, S. C. MAIN OFFICE
MAYWOOD, N. J. EASTERN DIVISION

WHAT OTHERS ARE SAYING

How It Came About

OCCASIONALLY, reference is made to the times past as "the good old horse and buggy days." Not many people really would like to go back to those "good old horse and buggy days," although he will admit that they did offer some advantages.

As we travel in automobiles, trains, and planes, we are not apt to realize that those means of travel didn't just happen so. As we are entertained by radios and movies with the exertion of practically no effort and with the expenditure of a negligent amount of money, we seldom give thought to how that came about.

When we wear clothes far superior in quality, comfort and appearance to the clothes worn in the so-called "good old days," not many of us give much thought to what was responsible for that change. When we sit down to our table and are able to eat foods through all seasons of the year, in every section of the country — undreamed of in the "horse and buggy days," we do not attach enough significance to the causes behind such an advantage.

We could go on and on and point out the many advantages and comforts that we enjoy now over and above the past, but the above will illustrate a point which we would like to call to the attention of our readers during this period when industry and free enterprise are being made the target of much tongue-lashing and abuse.

If you, our readers, each as an individual, had the power to pass judgment, would you condemn the profit motive which was responsible for our railway system? Would you be willing to destroy the incentive which made it possible for you to buy a radio or an automobile? Would you be willing to throw a monkey wrench into a system which made it possible for you to obtain frozen, fresh vegetables throughout the year? Would you want to kill the incentive which has caused the textile industry to so progress as to produce better fabrics in such quantities as to serve our entire nation well?

It is important that we each realize what has made this country great, and what has been responsible for the standard of living in this country to climb continuously even though we have had to experience from time to time some periods of adjustment.

We are sure that, even as this editorial is being written, hundreds of people are actively planning and working on new ideas which will bring benefits to all the people in this country. This is happening because those people realize that they have an opportunity to climb the ladder of success with accomplishment and profit. We who will enjoy benefits from such new developments cannot afford to say to such people, "You cannot benefit from your ideas, your planning, and your hard work." We must reserve for them and for ourselves the incentive and the freedom of opportunity of our capitalistic system. We cannot afford by law, or otherwise, to tell them after they have made a success that they cannot enjoy the fruits of that success. We cannot afford to condemn business, big or small, merely because the goal is profitable operations. If we do, we condemn our own future; we condemn progress for this nation.—From *The Textorian,* publication of Cone Mills Corp., Greensboro, N. C.

Safety Consciousness

IT has been truly said that people without imagination are unfortunate. The pain and inconvenience of an accident cannot be called products of imagination. The ability, on everybody's part, to imagine what accidents feel like and cost would automatically eliminate most of them.

You read in the daily papers that the number of automobile fatalities on the highways is steadily increasing each year. The reason for this trend is that no organized effort has been made to educate car drivers and develop their imagination to the point where they will realize that running stop signs and driving on the wrong side of the street will eventually get them.

During this same period that automobile accidents have increased, there has been a corresponding improvement in the number of accidents occurring in industry, simply because there has been an organized effort on the part of management to train and educate employees, to teach them the chances of being hurt and the ways of avoiding accidents by proper personal conduct.

A serious accident to a reckless automobile driver usually cures him, and he reforms if he is not killed. The same is true of careless factory employees.

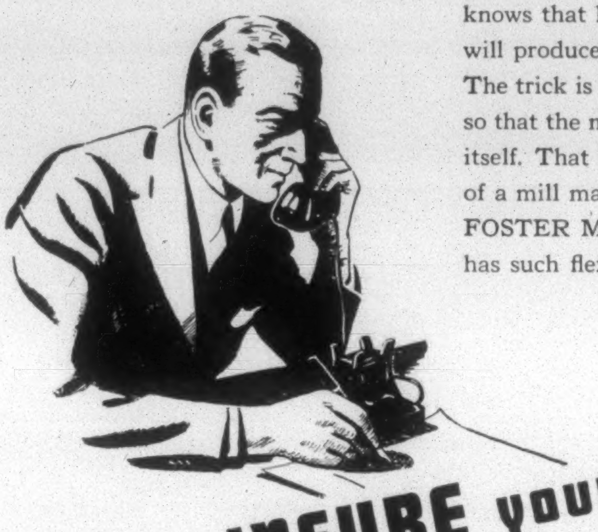
The purpose of our safety effort should be to develop the imagination of our employees to a point where they can visualize the results of accidents and thereby avoid them. This goal can best be accomplished by our personal contacts with our employees on safety subjects. — From *Textile Safety,* publication of the National Safety Council textile section.

George Can't Do It

ONE effect of the campaigning which is going on to raise money to "tell the truth about the American system of private enterprise" is that it has given employers the idea the job can be done by mass propaganda. So they "kick in" a few hundred dollars and turn the job over to George. Unfortunately, George can't do it. The job, if it is going to be done at all, must be done by you in your own plant.

Mr. Average Man thinks in terms of *his* job, *his* opportunities, *his* pocketbook. How many of your people out in the plant really understand that their welfare is bound up in the welfare of the company? How many really understand what happens to the sales dollar in your business? You publish an annual statement which tells all, but do the employees *understand* it and understand what it means to *them* in terms of job security?—*Industrial Relations.*

Every textile executive knows that most of his profits in the foreseeable future must come from increased production, reduced operating costs and improved quality. He also knows that he has a choice of modern winding equipment which will produce according to these conditions, at least temporarily. The trick is to INSURE such profits over a period of years so that the new equipment will have an opportunity to pay for itself. That requires FLEXIBILITY for the fibre requirements of a mill may change overnight in these fluid times. The FOSTER Model 102 is the ONLY winder of its type which has such flexibility, in addition to the other qualifications.



How to INSURE your winding profits

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FLEXIBILITY – Will handle any count or type staple yarn with same traverse mechanism—any angle of wind from 9° to 18°—any ordinary taper. Can be equipped to wind knitting cones, warper cones, dye packages, tubes or short traverse cheeses, one type on each side of the machine if desired.

INCREASED PRODUCTION – Doubles production over obsolete models because of high winding speeds (up to 700 y.p.m.) and labor saving devices mentioned under "ECONOMY". 7" traverse packages instead of standard 6", if desired.

ECONOMY – Reduces operating costs ⅓ under obsolete models because of self threading tension devices, easy doffing, 7" traverse package, if desired, and empty bobbin conveyors which empty into standard sized trucks. Repair costs as low as $3.50 per year per 100 spindle machine.

QUALITY PRODUCT – Automatic inspection. Conditioned yarn. Convex base prevents underwinding and nipping. Ribbon breaker prevents ribbon wind. Uniform density and properly shaped cones. Minimum tension on soft twist yarns prevents excessive breakage.

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Send for Bulletin A-95
for complete data.

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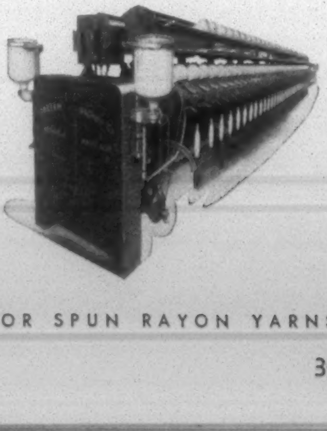

FOSTER MODEL 102

The Flexible Winder

FOR COTTON, MERCERIZED, WOOL, WORSTED, MERINO, SPUN SILK OR SPUN RAYON YARNS

textile bulletin

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The Revolt Meeting

The editor of this publication was one of those present at the Truman Revolt Meeting in Jackson, Miss., on Sunday, Feb. 22.

He attended the meeting upon a written invitation extended to him by Gov. Fielding Wright and found there delegates from nine other Southern states. Virginia, although generally in accord with the purposes of the meeting, was the only Southern state which was not represented.

Since those present voted not to give out any of the proceedings, except through the chairman, we cannot discuss the proceedings except to say that the attendance was large and the delegates were very determined.

We came away from the meeting fully convinced that Harry Truman is a "dead duck," and that he will not be elected president of the United States.

Jonathan Daniels, who recently succeeded his father, the late Josephus Daniels, as editor of the *News & Observer* of Raleigh, N. C., has paid his respects to our editor because the latter attended the revolt meeting. In doing so, Daniels showed his usual disregard for truth.

Prior to succeeding his father, the accomplishments of Jonathan Daniels consisted of writing articles maligning the South. A short time ago President Truman had him employed as some kind of flunkey at the White House and he appears to be willing to sell the South down the river and into social equality with Negroes if by doing so, he can keep Truman in office.

What little Jonathan says does not make much difference to us but we do object to his falsely stating that we opposed the abolition of child labor.

We did oppose the enactment of Federal legislation upon child labor because it violated the reserved rights of the states.

We have ample records to show, however, that we advocated the enactment of child labor laws by the states and that we advocated the first child labor law in North Carolina two years before it was enacted.

Many people disagreed with the editorials of Josephus Daniels but they did respect his opinions.

There are very few people who have or ever will have any respect for the opinions of little Jonathan.

Another Truman revolt meeting is expected to be held and if the editor of this journal receives an invitation, he will certainly attend.

Truman's Civil Rights Program

The so-called Civil Rights Program of President Truman may be divided into four parts.

(1) Federal Anti-lynch Law.

(2) Elimination of the payment of a poll tax as a condition of voting.

(3) Elimination of all state segregation laws relative to trains, busses, hotels, restaurants, schools, colleges, etc.

(4) An "F. E. P. C." law which will force employers to employ Negroes in offices, factories, mercantile establishments, etc., on equality with whites.

The first section, now under consideration by Congress, would place a fine upon counties in which there is a lynching and also place a fine upon the county sheriff.

The following is the table of lynchings in the United States since 1900, published in the *World Almanac*, and based on the statistics of Tuskegee Institute. It shows the steady downward trend over nearly half a century, until only one such mob murder occurred in 1945 and again in 1947. That is one too many, of course, but contrast it with the totals of only 20 years previously. The table follows:

Year	Total	Year	Total
1900	115	1924	16
1901	130	1925	17
1902	92	1926	30
1903	99	1927	16
1904	83	1928	11
1905	62	1929	10
1906	65	1930	21
1907	60	1931	13
1908	97	1932	8
1909	82	1933	28
1910	76	1934	15
1911	67	1935	20
1912	63	1936	8
1913	52	1937	8
1914	52	1938	6
1915	67	1939	3
1916	54	1940	5
1917	38	1941	4
1918	64	1942	6
1919	83	1943	3
1920	61	1944	2
1921	64	1945	1
1922	57	1946	6
1923	33	1947	1

The *Washington Post* says:

> We cannot help thinking that this vote-catching venture has no place in the present session of Congress. Its effect is to arouse animosities at a time when there is urgent need for national unity. The lynching menace has already been put down, and we trust that the last vestige of it will soon disappear.

The only lynching during 1947 was under the following circumstances:

A Negro employed a Greenville, S. C., taxi cab to drive him to a place in the country near Easley, S. C.

The Negro not only refused to pay the fare but cut the taxi cab driver in a very brutal manner and left him upon the road in a dying condition. He even cut large pieces of flesh out of the taxi cab driver's legs.

A group of fellow taxi cab drivers caught the Negro and shot him to death.

Under the Federal law, which President Truman is urging Congress to enact, Greenville County and the sheriff would be required to pay fines and the family of the Negro who foully and brutally cut the taxi cab driver to death would receive a very substantial sum of money.

About the time of the lynching described above, a Peoria, Ill., man and his wife were shot to death while walking home from a moving picture show.

An automobile containing three rival gangsters sped by and sent a shower of machine gun bullets into the man and his wife. His racket had reduced their profits.

Nobody has ever been punished for that double murder and the proposed law would not touch the gangsters.

We are unable to understand why the Federal Government is vitally interested in the lynching of a brutal murderer at Easley, S. C., but is not interested in a double murder at Peoria, Ill.

The second section of the Civil Rights Program is the elimination of the poll tax as a condition of voting.

North Carolina, South Carolina and Virginia refused to ratify the Constitution of the United States until the Bill of Rights was adopted with the following provision:

> The powers not delegated to the United States by the Constitution, nor prohibited by it to the States, are reserved to the states respectively, or to the people.

The above was considered a guarantee to the several states that the Federal Government would never have policing powers or make regulations concerning the behavior of the people of the several states.

It is now proposed that, in spite of the solemn contract between the Federal Government and the sovereign states, the reserved powers of the states are to be set aside.

The third section deals with segregation.

If it is enacted Negroes will be seated beside white people on busses and trains, and restaurants, hotels, schools and colleges will be forced to admit Negroes and seat them beside white people.

Most Negroes would prefer to follow present customs, but there are groups of Northern white people who seem determined to abolish all segregation.

The last, or F. E. P. C. section, will force employers to employ Negroes and permit them to work side by side with whites.

If a Negro applies for a job in an office or in a factory, the employer will have to give him or her a position or be subject to a suit and a penalty unless he can convince a Federal court that the denial of employment was not because the applicant was a Negro.

White stenographers will be forced to work side by side with Negro stenographers and under Negro office managers.

White spinners in textile mills will have to work side by side with Negro girls and to share restaurants and rest rooms with them.

The inevitable results of such Federal laws will be to turn the white people of the South against Negroes and develop ill will between the races.

President Truman's Civil Rights Program was, if our information is correct, written by Mrs. Eleanor Roosevelt, Edwin Embree of the Rosenwald Foundation of Chicago, Ill., and Will W. Alexander of Chapel Hill, N. C., former secretary of the Southern Interracial Council.

We understand that it was already written when handed to Harry Truman and we doubt that he has ever read the document.

The failure of a haberdashery store at Independence, Mo., some years ago, did not then attract much attention, even in Independence, but had the people of the South known to what it would lead, they would have gladly raised enough money to enable an incompetent man to continue to wait on customers and sell shirts and drawers to them.

TEXTILE INDUSTRY SCHEDULE

April 2-3—Annual convention, **ALABAMA COTTON MANUFACTURERS ASSOCIATION**, Hotel Beuna Vista, Biloxi, Miss.

April 3—SOUTH CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION, Parker High School, Greenville, S. C.

April 3—PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Robert E. Lee Hotel, Winston-Salem, N. C.

April 5-8—Third **SOUTHERN MACHINERY AND METALS EXPOSITION**, Atlanta (Ga.) Municipal Auditorium.

April 8-10—Fourth annual **SOUTHEASTERN INDUSTRIAL RECREATION CONFERENCE**, Greenville Hotel, Greenville, S. C.

April 10—SOUTH CENTRAL SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Hotel Patten, Chattanooga, Tenn.

April 17—NORTHERN NORTH CAROLINA-VIRGINIA DIVISION, SOUTHERN TEXTILE ASSOCIATION, site of meeting to be selected.

April 22-24—Annual convention, **AMERICAN COTTON MANUFACTURERS ASSOCIATION**, Roosevelt Hotel, New Orleans, La.

April 24—EASTERN CAROLINA DIVISION, SOUTHERN TEXTILE ASSOCIATION, N. C. State College School of Textiles, Raleigh.

April 29-May 1—Annual convention, **AMERICAN COTTON SHIPPERS ASSOCIATION**, Dallas, Tex.

May 1—PIEDMONT DIVISION, SOUTHERN TEXTILE ASSOCIATION (includes former Gaston County Division), Charlotte, N. C.

May 3-7—INTERNATIONAL EXPOSITION OF TEXTILE MACHINERY, EQUIPMENT AND SUPPLIES, 71st Regiment Armory, 34th Street at Park Avenue, New York City.

May 5-7—Annual convention, **COTTON MANUFACTURERS ASSOCIATION OF GEORGIA**, Sheraton-Plaza and Princess Issena Hotels, Daytona Beach, Fla.

May 6-8—Annual (North Carolina) **STATEWIDE INDUSTRIAL SAFETY CONFERENCE**, Sir Walter Hotel, Raleigh, N. C.

May 10-14—Third annual **NATIONAL TEXTILE SEMINAR**, Shawnee Inn, Shawnee-on-Delaware, Pa.

May 13-15—Annual convention, **SOUTHERN TEXTILE ASSOCIATION**, Ocean Forest Hotel, Myrtle Beach, S. C.

May 13-16—Annual outing, **CAROLINA YARN ASSOCIATION**, Carolina Hotel, Pinehurst, N. C.

May 17-22—NATIONAL COTTON WEEK.

May 20-21—Annual meeting, **SOCIETY OF PLASTICS INDUSTRY**, Atlantic City, N. J.

May 27-29—Annual convention, **TUFTED TEXTILE MANUFACTURERS ASSOCIATION**, Sheraton-Plaza Hotel, Daytona Beach, Fla.

June 18—PIEDMONT SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Ocean Forest Hotel, Myrtle Beach, S. C.

July 22-24—Ninth annual **COTTON RESEARCH CONGRESS**, Dallas, Tex.

July 24—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Atlanta, Ga.

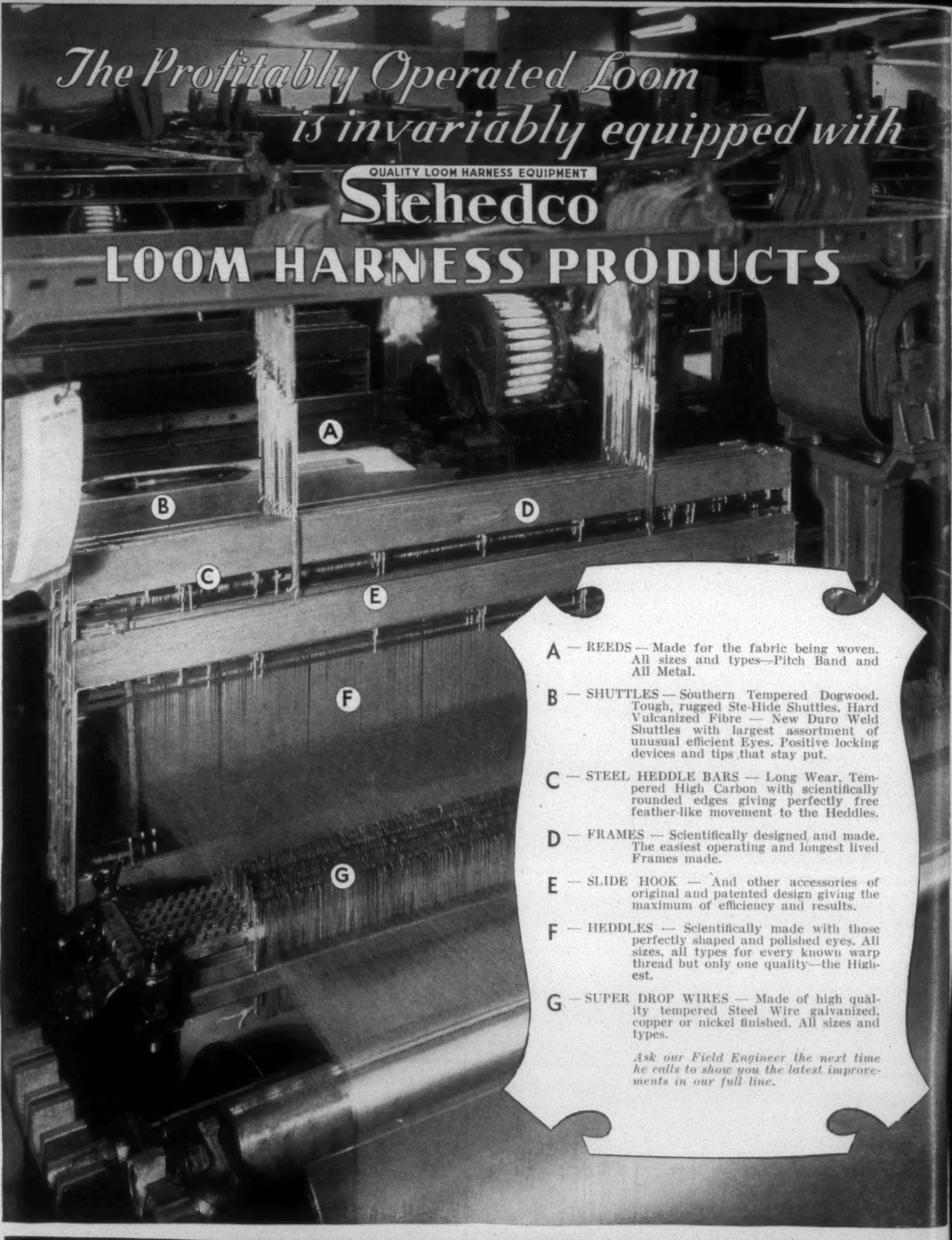
Sept. 25—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Columbus, Ga.

Sept. 27-Oct. 2—Third **NATIONAL PLASTICS EXPOSITION**, Grand Central Palace, New York, N. Y.

Oct. 4-9—15th **SOUTHERN TEXTILE EXHIBITION**, Textile Hall, Greenville, S. C.

Oct. 20-23—Annual convention, **AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS**, Sheraton-Bon Air Hotel, Augusta, Ga.

Dec. 4—SOUTHEASTERN SECTION, AMERICAN ASSOCIATION OF TEXTILE CHEMISTS AND COLORISTS, Atlanta, Ga.



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BETTER THINGS FOR BETTER LIVING... *THROUGH CHEMISTRY*

ployer liable for accidents. Accidents happen wherever people are brought together and more especially where people and machines are working together.

Owners of machines must, and do, accept the responsibility of providing the same necessary safeguards for machines that owners of dangerous animals must provide. Fortunately, the textile industry is not, and is not considered, a hazardous industry.

Again, I say the employer is interested in accident prevention—not because he "has to" but because he "wants to." Today's employer and his representative management are no longer the bloodthirsty creatures that drive workers at a pace that is injurious to body and health; neither do they operate booby-trap plants. Modern employers and today's management recognize and accept the responsibility of providing a safe working place. Today's machines are designed and bought with safety of the employee a major consideration. I say that the employer and management in the textile industry have done a good and excellent job of providing safeguards for the machines. This is attested by the fact that most of today's accidents are not caused by machine faults or unguarded machines, or lack of proper equipment or physical layout, but rather unsafe practices on the part of the employee.

I cannot help but recall to mind the case of the young overseer who noted that the practice of the employees in his department was to blow off their clothes with the air hose. This young overseer was aware of the fact that a fatality had occurred in a neighboring plant from such practice. Being intelligent and working to prevent a similar accident, he provided whisk-brooms for the employees to use and then instructed all employees to cease using air hose to blow off clothes. (Keep in mind no one in his department had as yet been injured by the use of the air hose.) On the first day that the whisk brooms were provided, this is what happened: A few minutes before quitting time, one employee was using a whisk broom to brush off his clothes, another employee rushed up and jerked the broom from the hand of his fellow employee, thereby cutting severely the palm of the employee who was using the broom. Results: a lost-time injury, a compensation claim filed and paid. Was the management in this case lacking in interest? Was the young overseer safety conscious? One thing is sure, management was responsible.

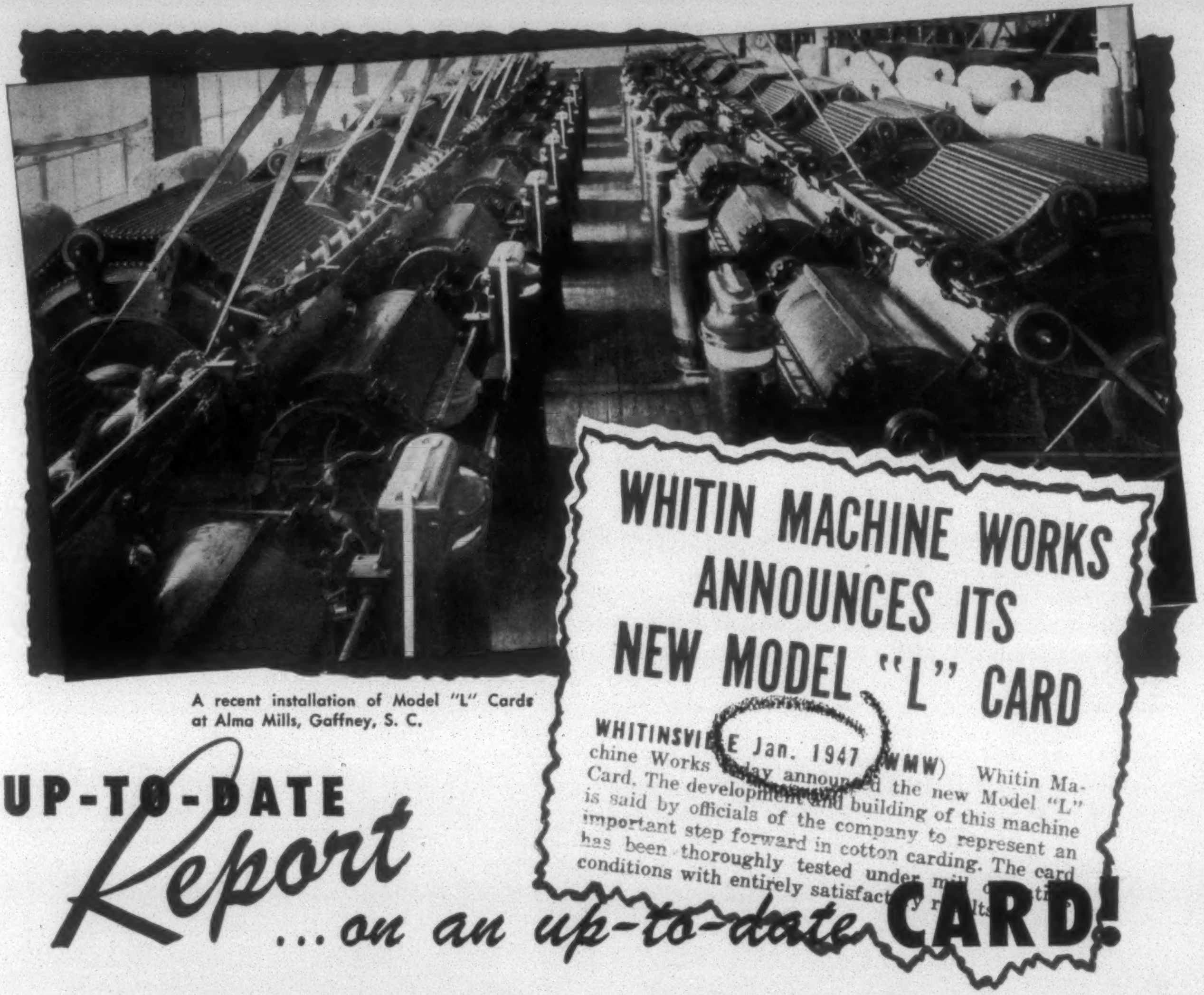
"Yeah, experimental lab's been campaigning for private space for so long we finally had to give in to them."

Public opinion is also a factor in influencing the interest of the employer and management in accident prevention. Because of the tendency of the employees to become callous toward the machines they operate and toward safety matters, the employer has had to resort to establishing and enforcing safety rules and regulations. Often management is placed in a very embarrassing position by the strict enforcement of safety rules, both by the workers and by a sometimes oversympathetic public. Often management is criticized because it enforces the rules that will prevent the accident that "hasn't happened" and gains the reputation of being hardboiled and unreasonable. On the other hand, if management fails to enforce safety rules and a plant gets the reputation for high frequency of employee injuries, the public and employees immediately stamp management as indifferent to the welfare of employees.

Of course the employer is interested in accident prevention. He knows full well that he has a moral obligation to the worker and society. He knows that accidents cost money. It costs money to carry employee liability insurance. That cost is in proportion to the accident frequency and severity. He is well aware that unless he sets up adequate means for the prevention of accidents, that his insurance rate will go up. He is also well aware of the four to one ratio in the cost of accidents. He knows that accidents means loss of production and at times damage to product and machines. He knows that unless his plant enjoys the reputation of being a safe place to work, that he will not be able to attract and hold the best of workers. The employer, which very likely is a corporation, realizes through its management that today as never before it needs public good will. The man on the street is all too eager to believe that corporations or stockholders are greedy and cold-blooded, and he is all too ready to blame management regardless of the circumstances. People are just that way. And there are plenty of sources that are anxious to use an ear tuned to their poisonous wave lengths. Management knows that it cannot enjoy public good will if there is a stream of maimed and crippled coming from the plant. I think that sometimes today's management appreciates more fully the human assets represented by the skill and know-how of the worker than either the public or the employee realizes. I think the employer of today and present-day management is more humane in its outlook on safety than either the public or the worker.

Certainly in the field of accident prevention the employer *realizes* and *is* his "brother's keeper." This is evidenced by the modern, clean, well-lighted, well-kept plants, that are the general rather than the exception to the rule. Yes, the employer is interested in accident prevention because it is "good business" and all that "good business" implies. Management has proven that it has the ability to produce goods within the cost limits and to stay abreast of technological change. This same ability is being used and must continue to be used to prevent accidents.

Safety pays, no one denies that. It pays in more ways than one. But to management one of the most disheartening things that I know of is the attitude of some of our state law-making bodies and the attitude of some of our



WHITIN MACHINE WORKS ANNOUNCES ITS NEW MODEL "L" CARD

WHITINSVILLE Jan. 1947 (WMW) Whitin Machine Works today announced the new Model "L" Card. The development and building of this machine is said by officials of the company to represent an important step forward in cotton carding. The card has been thoroughly tested under mill operating conditions with entirely satisfactory results.

A recent installation of Model "L" Cards at Alma Mills, Gaffney, S. C.

UP-TO-DATE *Report* *...on an up-to-date* CARD!

Our new Model "L" Card was first announced to the industry a year ago through the textile trade journals. Since then the wide spread acceptance of, and demand for this model has proved its exceptional merit.

Literally hundreds and hundreds of these cards have been built and installed. Reports from mill after mill are always the same . . . favorable reports of better production, greater efficiency, increased cleanliness and quieter operation.

Numbered among the many new and beneficial features of the Model "L" Card are:

- Card frame, cylinder bearing pedestals, and arches have been strengthened to provide greater rigidity which is especially beneficial in maintaining card settings.
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- Oilite bearings have been provided in many locations to insure better lubrication.
- All gears have cut teeth for quieter operation.
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- Adjustments can be made with greater ease and convenience.

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industrial commissions. Oftentimes no matter how great the interest of the employer is in accident prevention, no matter how hard the effort, and no matter how low he brings the accident and the severity figure, he finds that insurance costs are increased. Where this kind of short-sighted, misguided attitude exists, it is discouraging to accident prevention from an economic standpoint. This same sort of misguided attitude and lack of interest on the part of the public, if continued, can place industry at a disadvantage and perhaps cause industry to move to other areas. I have in mind the following insurance rates from four Southern states: A—48 cents per $100 payroll; B—50 cents; C—66 cents; and D—93 cents. Why should a plant locate in a state with this disadvantage? Who is the greater loser, capital or labor, or the public? These rates not only prevent management from getting the most from its invested capital and using it to produce jobs and better goods, but it acts as a deterrent upon new industrial enterprises.

In conclusion and in a kind of summary—management's interest in preventing accidents should be, and is, for two reasons, social, or humane and economic. The first, *social,* must always remain the most important. Industry is inextricable to the social order and progress and that relation is nowhere so apparent as in the conservation of human life. Accident prevention becomes an activity directed toward improving the lot of men and women in dustry. Death must come to us all and deaths accompanying grief is inevitable, but grief that springs from accidental injury is not a "must" in the language of present-day employees and management. Pain, suffering and wrecked lives are not necessary by-products in today's industrial plants.

Now the economic. Accident prevention is profitable. Experience has proven that accident prevention increases production, decreases overhead charges, cuts down the rate of labor turnover and reduces the cost of compensation. Disability means lost time, which in turn means loss of skill and know-how. Any such loss slows up the plant and adversely affects quality. Whatever slows up the plant increases operating cost and overhead charges.

Management thus finds the economic basis for accident prevention a challenging stimulus, but present-day management remembers to keep the two basic reasons for accident prevention in their correct order of importance. First, the human basis; second, the economic basis. Yes, in the field of accident prevention, management plays well and vividly the role of his "Brother's Keeper."

Mr. Caughman is well known for his writing and trade association work in the Southern textile industry. His remarks were made before the ninth annual Southern Safety Conference at Birmingham, Ala., March 8.

Japan To Build Power Looms For Export

A spokesman for S. C. A. P. in Tokyo revealed recently that Japan has contracted to build more than 4,000 cotton and rayon power looms for export in 1948. The official stated that some buyers were supplying the necessary raw materials, while others were not. The purchasers were not named.

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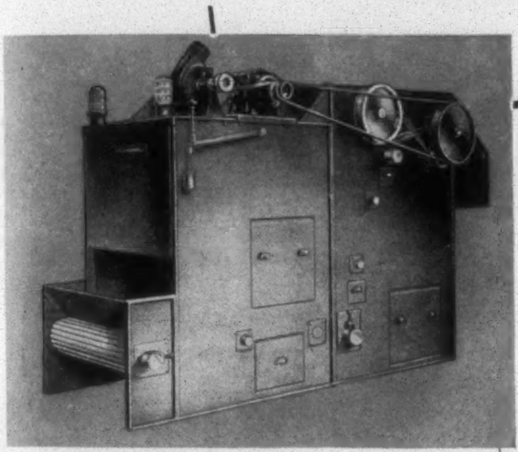
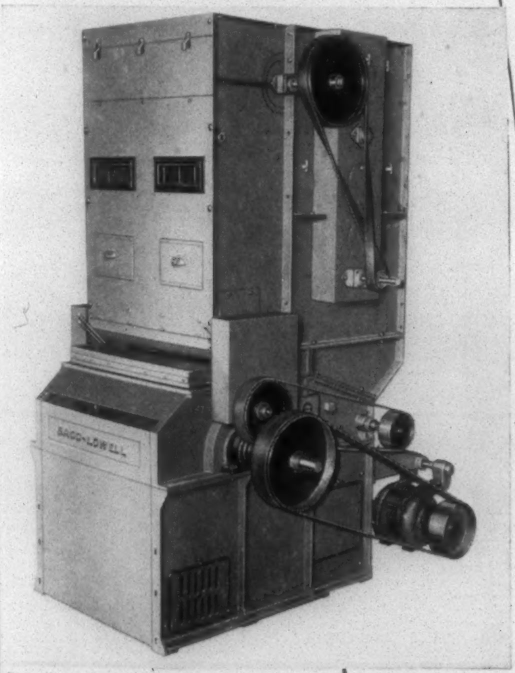
The Saco-Lowell line of modern Opening Equipment consists of four units, each with a distinct purpose . . .



The F-7 Cleaning and Blending Feeder



The #12 Lattice Opener

1. Blending feeders to take full advantage of the gentle opening action of the feeder aprons.
2. The Vertical Opener which combines the cleaning and blooming action of swirling air currents with the effective trash removal obtained through the medium of beaters and grid bars. The lighter impurities settle in an air space outside the grids.
3. The #12 Lattice Opener, preferably in tandem, with its horizontal beater which effects a combing action to the fringe of stock so that pepper leaf, seed particles, and other light bits of foreign matter are removed.
4. The #11 Dust and Waste Extractor provides strong air currents to carry away the lightest types of trash, dust, and pepperleaf.

We earnestly recommend the use of our Recirculating Air Filters in the Opening Line. The recirculation of air makes possible the closer and more economical control of the conditions of temperature and humidity in the room. The returned air is clean and free of dust particles.

If you are troubled with dirt or specks in your yarn, a survey by our engineers may develop means to improve your product.

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INDIA'S TEXTILE PROBLEMS

By W. A. THOMASON, Jr.

A FAVORITE toast of American military men in India during World War II was:

> Here's to the little Hindu
> Who do's the best he can do
> He ain't got no aunts
> To make him no pants
> So he has to make his skin do.

From outward appearances that is almost the case. The Indian villager may have a turban on his head and a *dhoti* as his only wearing apparel. But that turban will be made of from five to 30 yards of cloth while the *dhoti* has from two to six yards. The *sari* his wife wears will be about six yards in length. When you consider that almost 70 per cent of India's 420 million people are thusly dressed that adds up to a lot of cloth.

In the north the ordinary dress for men, both Hindu and Moslem, particularly in the Punjab, is the *salvar,* a kind of loose, gathered pajama which is worn with a flowering shirt. The Kasmiri Hindus favor a slightly varied style in the *churidar,* which is not unlike jodhpur breeches and is tightfitting below the knees. The Moslem Pathan and Baluchis often wear a velvet jacket, somewhat like a waistcoat, that is sometimes heavily embroidered in gold thread. On ceremonial occasions both Hindus and Moslems in the north wear a long coat known as the *sherwani,* a picturesque garment often made of richest silk or satin and adorned with silver or jewelled buttons. It is worn with the *churidar.*

The ordinary garb of Hindus throughout India is the *dhoti,* which consists of a piece of white cloth, linen, muslin, silk, worn to cover the wearer from the waist down. It is often adorned with a border, which may be woven or made of gold and silver thread; the length of the *dhoti* varies from four to five yards. In the north the *dhoti* is worn by taking the two end-pieces between the legs and tucking them in the waistband behind, while in Bengal only one edge is tucked in, leaving the other loose in front. A variation of the *dhoti* is the *lungi,* normally two yards in length, which is wrapped round the waist like the sarong of the Malayan. It is popular with the Bangali Moslem and is widely used by the peasantry both in the north and in the south.

India's requirements for cloth are about 6,250 million yards per year. In her 390 mills throughout the country, she produces about 4,000 million yards. In the village cottage industry another 1,500 million yards are produced. That is not enough to clothe the tremendous population, and yet during the period prior to the war India exported half of the six million bales of cotton grown annually. It is interesting to note that 1,500,000 bales annually went to Japan where cheap fabrics were made, brought back to India and sold at prices under those of domestic fabric.

India not only has a struggle to clothe its population, but also at a price the people can afford. The average Indian villager earns his living from farming on a small strip of land owned by the government or a large landowner. His total earnings are about 80 rupees or 25 dollars a year. The other three-tenths of the population are factory workers, shopkeepers, clerks, business men, landowners, lawyers or doctors. Their earnings vary from 20 rupees to thousands of rupees a month. The cottage industry, that is, the village spinners and weavers, are the source of basic supply for the villagers, but their production must be supplemented by the mills.

The cotton mills vary from small two-loom shops to modern 4,000-loom, self-contained units. They are equipped with practically every kind of machinery made in the world. Most is from England, some is from Japan, Germany and the United States. Several of the plants, especially in Madras, Bombay, Delhi and Ahmedabad, are very modern. However, only two mills which are located in Madras were capable of making the khaki twill shirting and waterproof poplins required by our Army during the war. Dyeing and finishing plants of any consequence are few and far between. I once received a letter from an alleged dyeing and finishing company on a fancy letterhead complete with cable address. I decided to visit the plant to see if it was capable of doing any of our Army work, and after searching over half of Delhi I located it—a mud hut with two big pots in the back yard! However, there are several good dyeing and finishing plants with which I am familiar. One, in Madras at Buckingham and Carnatic Mills, mercerized, vat dyed and waterproofed our Army fabrics. The other, Turkey Red Dye Works, just outside Bombay, finishes sheeting, print cloths and plain shirting.

Fundamental Factors

To get an over-all idea of the problems confronting the Indian textile industry, let's analyze the factors which are necessary for the success of any manufacturing enterprise and see how India stacks up. I list the five major fundamentals as power, labor, machinery, materials and demand.

Taking demand first, we have seen that the demand for textiles exists in India. The type of fabrics needed are primarily durable, cheap fabrics for the lower income group. Fabrics are also needed for the hand printing, hand embroidery, and export trade. Fabrics are generally sold to consumer as piece goods since there is no garment industry in India. There are only five major clothing factories in India and they are owned and operated by the government for manufacturing military uniforms. If you want a shirt, you have it made to order. The same with shorts, suits, shoes, and all other items of apparel. This is due primarily to the different types of dress used in different sections of the country.

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Raw materials are or can be made available in India. Silk is produced in limited quantities. India is second only to the United States in production of raw cotton, averaging approximately 6,000,000 bales a year. Plans for the establishment of rayon producing plants are underway. Six million bales of cotton a year is a lot, but it falls short of the requirements. How can it be increased? Look at a comparison of the yield with other countries:

India	98 pounds per acre
United States	200 pounds per acre
Egypt	450 pounds per acre

The prime reason for the low yield is that very little or no fertilizer is used, and most of the cotton is grown in low productive areas. The staple length of the varieties grown under these conditions is 5/8ths to 7/8ths of an inch. With proper fertilization and irrigation the land can be made suitable for varieties having staple lengths of one inch and above. This has been proven in experiments being carried out in the province of Sind, where virtually desert lands have been irrigated and medium and long staples grown successfully.

The mill machinery in India should be pretty well shot by now. During the war the mills were forced to meet very rigid production schedules in the manufacture of army fabrics. The order of the day was to produce the greatest yardage possible with the facilities available. Machinery speeds were increased to almost unheard of limits. Cloth was cloth without regard for quality. Replacement parts were not readily available, and therefore maintenance was sadly lacking. I know of several cases in which replacement parts were completely controlled by the black market. One of them was quite amusing. In our manufacturing program, we included cotton socks. Our initial order was to be for about 200,000 pairs. I arranged to get cotton from Egypt and dyestuffs from Imperial Chemical Industries. Then with the help of the Indian Textile Commissioner, I started to locate suitable knitting facilities. When we started, the price of knitting needles was approximately 45 rupees a thousand. In less than a month the price was over 2,000 rupees a thousand. Word had gotton around that the Americans wanted to manufacture socks and presto—the needles went to the black market. The situation was cleared up by our aiding the Government of India to get needles on Lend-Lease.

Labor in India is cheap but generally inefficient. Indians are very talented in various handicrafts such as block printing, ivory carving, woodwork, etc. They have not taken to the machine very well. They will do so much work on a machine and that's all. For example, if a worker is running two sides of a spinning frame, he will do a pretty good job of it, but try to give him three sides, and he will not run any of them. The story goes that the manufacturers had frames lengthened to get each worker to run more spindles. It is commonplace to see a weaver running two or four looms. There are many and varied theories as to the reasons that the workers will not run more machines; I have my own. Most workers come from villages where many of them were peasant farmers. They come to the city to try and get a better life. In the city they still live in mud huts or in ramshackle tenements known as *chawls,* which are worse. They have no water or electricity. At this point I emphasize that India is a country of extremes. It's either very hot or very cold, a man is rich or he is poor, he lives like a king or like a dog. There is no middle of the road in India. Therefore a spinner who makes about $8 a month knows that if he runs that extra side, he will not increase his monthly income appreciably, it will not get him electric lights or running water. He can improve his living very little. So, being a man who measures success by results, he says, "Why should I work harder when it will not help me live better."

Another factor in labor inefficiency is absenteeism of workers. Indian families always remain intact with the father as the head man. City workers like to return to the village very often to see the rest of their family and friends. When they decide to go for a visit, they just leave with no thought for their jobs. It is therefore very difficult to keep production going at times because so many workers are out. At the Central Clothing Factory at Shahjahanpur which made most of our uniforms, 8,000 of the 18,000 workers were absent from work one day. I asked the manager why he didn't fire the habitual offenders and get steady workers. He replied, "It doesn't do any good. If I fire one, he goes home, shaves off his beard, and comes back to get a job under another name. If he has no beard he grows one!" That's the labor situation. They will do what they want to, when they want to, and no more, unless they are shown that their lot will be improved.

Power is readily available in the large industrial centers. The potential power supply for India is tremendous. Cheap hydro-electric power plants are located in Western India, and plans are under way for the harnessing of many of India's large rivers in the Northern and Central areas.

So, looking at the fundamentals necessary for successful manufacturing, India has the demand for textiles. Raw materials are available but the position can be improved to a great extent. New machinery is needed at once, and since practically all of it must be imported, domestic machinery manufacturing facilities are desirable. Plenty of labor is there, but the workers must be properly trained and given an incentive to produce, primarily by affording them better living conditions. Power supply is a great problem away from the big industrial centers, thereby tending to discourage establishment of new plants in locations desirable in many respects.

The goods can be produced. That was demonstrated during the war when the clothing and textile plants in India produced $25,000,000 worth of clothing and textiles for the United States Army in two years. "Experts" said that the industry could not do it because of the comparatively high-grade fabrics, which required dyes and finishes not commonly used there, and the terrific demands already placed on them by civilian and other military requirements.

To get the industry stabilized the leaders of Indian textiles must place their sights on the ideal long range goal—more and better raw materails, domestic machinery manufacturing plants, improved conditions for labor, and cheap nation-wide power.

Mr. Thomason currently is an assistant professor in the yarn manufacturing department at the North Carolina State College School of Textiles, Raleigh. As an Army Quartermaster Corps officer stationed in India during the war he was in charge of locating, setting up, supervising and maintaining facilities for the production of uniforms in India for American troops stationed in that country.

The government March 1 denied increases in rayon yarn prices recommended by American Bemberg Corp. and North American Rayon Corp. David L. Bazelon, Assistant Attorney General and Director of Alien Property, Department of Justice, informed J. E. Bassill, head of both concerns, that an increase in rayon yarn prices was not justified at this time. The boards of directors of the two firms had on Jan. 15 recommended increases in prices averaging six and seven per cent, respectively.

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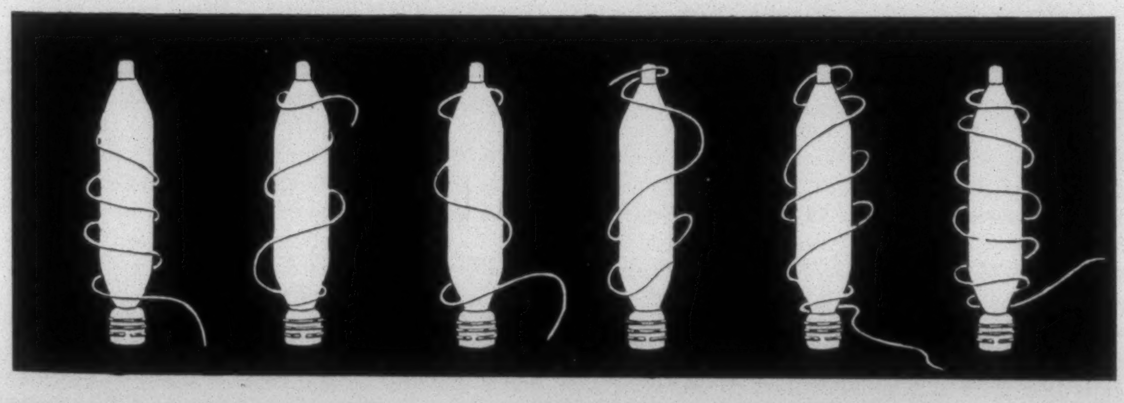

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THE MILL OF TODAY

By ROBERT Z. WALKER

Part Two: The Feeder Is Important

A CONTRAST has already been made of the old and new methods of laying out the new stock behind the feeders. The emphasis was placed on the point of providing sufficient space for blending so that the mix of fibers would remain constant at all times. Although this was a long stride towards improving the effect of the entire opening line on the stock, there have been many changes in the feeders which are used and in the manner of their use.

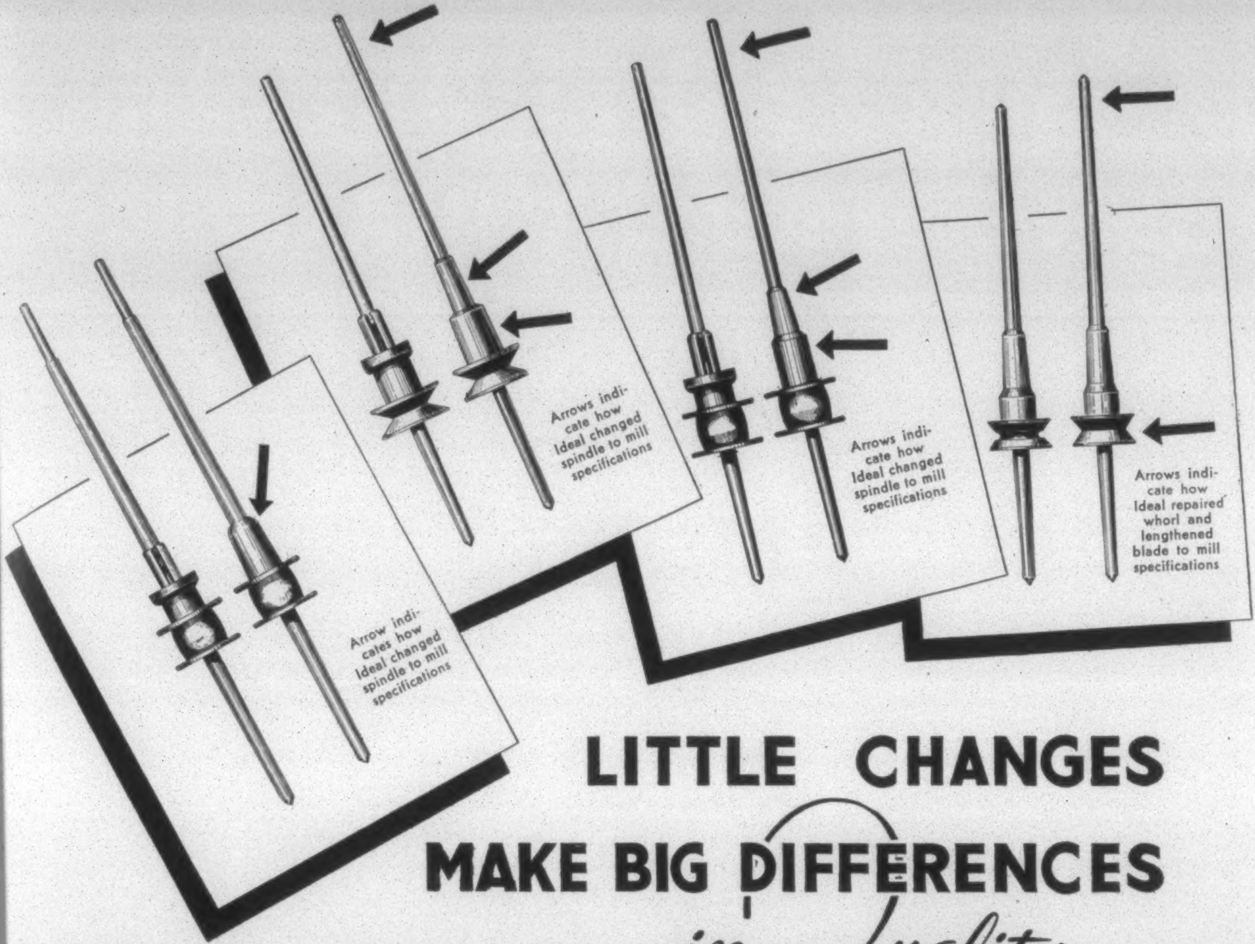
It has been the general opinion for many years that the only work required of the feeder was to separate the large clumps of cotton into smaller clumps; the density of the clumps of fiber was not particularly examined or considered. It is now realized that the density of the stock passing forward from the feeder is second in importance only to the over-all size of the masses of fiber. The purpose of the opening process is to open the fibers as much as possible and to remove the dirt, leaf, motes, and particles of foreign matter from the good fiber. This waste material is usually entangled in the fiber and must be shaken loose. The sooner that the fibers are separated from each other the sooner the waste matter can be removed.

The modern practice is to regulate the feeder so as to produce an opening action which will deliver the fiber from the machine in small clumps which are not heavy masses of fibers torn from a large section but rather clumps which have been acted upon so that the separation of the individual fibers has commenced. The decrease in the density of the groups of fibers aids the movement of the stock by air and is helpful in producing picker laps which meet the standards of the mill in regard to evenness and cleanliness. The first change in the mill which this caused was to make necessary an alteration in the mill organization. The old single bale breaker was set to process enough stock for the operation of the opening line. This meant that the machine had a production of approximately 500-800 pounds. With such a high poundage of stock running through the machine, an individual clump of fibers was acted upon for only a very short length of time.

The present recommendations set the hourly production per feeder between 100 to 250 pounds per hour. Instead of using one machine, a number of feeders are arranged together in line and deliver the stock onto a feed table which carries the combined production into the remaining machinery of the opening line. The first advantage of this system is that there is a multiplication of the blending which occurs. As the table carries the stock towards the conveying pipe at one end the clumps of stock from the individual feeders are intermingled and mixed with stock from the other feeders. The major advantage in using a number of feeders is that it produces the amount of fiber which each feeder must process in an hour, and therefore allows the machine to process the stock more slowly and thoroughly.

The relation of hourly production per machine to the quality of work performed by the feeder is fixed in a certain relationship which can be more readily understood by a study of the operation of the machine on the masses of fibers. The stock is placed onto the feed apron of the feeder in a compact mass practically as it is taken from the bale. The fibers will be slightly more fluffy if the bale has been opened for a period of 24 hours but must still be thoroughly processed. The large clumps which are on the feed apron of the machine are carried forward to the lifting apron. The lifting apron is fitted with steel pins arranged in rows on the wooden slats forming the apron. The pins are slanted upward and penetrate into the groups of fibers as the apron is carried upward. This lifts the clump and carries it along with the apron. If the clump is too heavy to lift the pins tear a section from it and carry the section upwards, thus beginning the opening process or separation of groups of fibers into smaller sections. Located above and slightly behind the top of the lifter apron is a comb roll, or comb, which is set a certain distance from the lifter apron. As the clumps of fibers which are impaled upon the pins of the lifter apron reach the top of the machine the comb roll or comb strikes the clump and separates the mass of fibers so that only a small amount will remain upon the lifter apron pins. The remainder of the fibers drop back into the hopper and are again carried forward by the feed apron. The stock which remains on the pins of the lifter apron is brushed off by the doffer roll, which is a roll having four leather blades set so that they will just touch the pins. This stock drops through the mouth of the feeder onto the feed table mentioned above.

The amount of production per feeder depends upon two general factors; the over-all speed of the machine and the distance between the combing roll and the lifter apron. When using only one feeder per opening line it was necessary to maintain a high speed and to set the comb far away from the lifter apron in order to obtain the high production needed. The disadvantage of running the feeder at a high speed is that the fibers do not remain in the feeder for a sufficient length of time to take full advantage of the machines potential opening action and blending capacity. The chief advantage of setting the machine for a low production is that the distance between the lifter apron and the combing roll will be quite small. The reduction in this distance causes a corresponding reduction in the size of the groups of fibers which are carried forward to the doffing roll and delivered from the machine. The efficiency of operation of the machinery in the opening line is heightened as the clumps of fibers which pass along are smaller


Arrow indicates how Ideal changed spindle to mill specifications
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Arrows indicate how Ideal repaired whorl and lengthened blade to mill specifications

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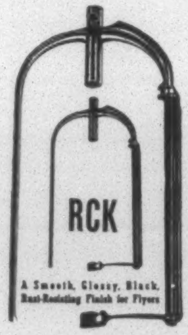
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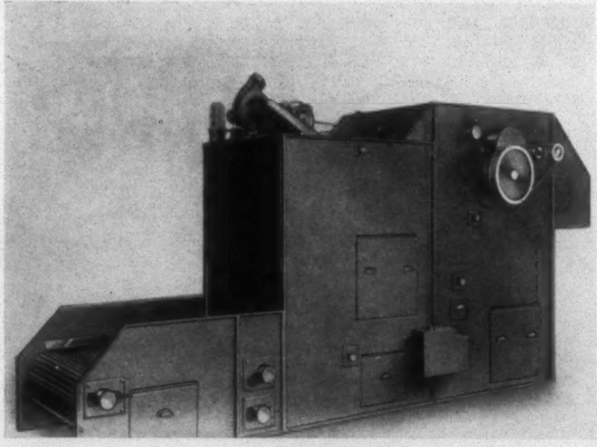
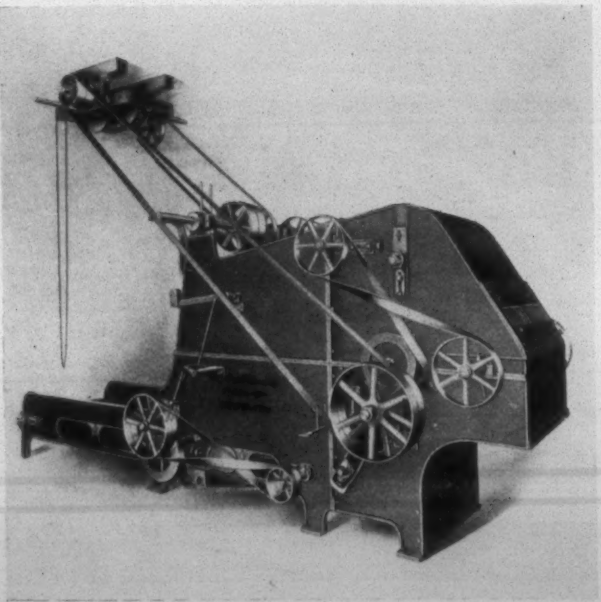
and can be processed more thoroughly and more uniformly.

If the portion of a large clump of fibers that passes out of the feeder is smaller, it follows that the section which is knocked from the lifter apron back into the hopper will be greater. This means that the clump will be reworked more times, each time becoming smaller. The clumps of fibers which are in the hopper are kept tumbling around and become more thoroughly mixed with similar clumps; this is an excellent point at which the mixing and blending of the stock from different bales can be accomplished. The tumbling and dropping of the clumps shakes the stock so that the individual fibers are loosened from each other. As the fibers become less tightly entangled a large amount of dust, sand, leaf, and other foreign matter is allowed to drop out, so that a certain amount of cleaning and blooming is done in the feeder.

The modern feeder has an enclosed hopper which keeps the dust and lint into the enclosure of the hopper. At the top of the hopper is a small fan which exhausts the air from inside the hopper into a filter. The fan draws the dusty, lint-filled air from the hopper and does not allow it to escape into the atmosphere of the room, keeping the air uncontaminated. The removal of the dust is important as it leaves the fibers clean and lustrous. The cleaning and blooming which takes place at the feeder is done without the expense of damaging the good fiber, for the action of the feeder is extremely gentle and cannot weaken the fiber by beating it. The thoroughness of the cleaning action of the feeder aids in lowering the amount of cleaning which must otherwise take place in other machines of the opening line where the processing is not so gentle but is accomplished by beaters of some type. If the mill finds that the production of the feeders which it has installed in the opening room is too low there are several methods which can be used to increase the production to the desired rate. If the increase must not be too great the speed of the entire machine may be increased. This is the best method as the relationship in speed of one component part to the others is not disturbed. On most modern feeders the speed of the machine is controlled by the size of the pulley on the left-hand end of the doffer shaft, as this shaft drives the other sections of the feeder. This pulley is called the production pulley and is changed to a larger diameter to drive the machine at an increased speed.



Contrast the modern feeder (above) with the older type (below). The present-day feeder is steel instead of cast iron, motor-driven and free from long belting.



This method may be used until the speed of the lifter apron reaches a maximum of 25 r. p. m. The lifter apron should not be operated at speeds higher than this as it will become unsteady and will wear quickly. If this speed is reached without attaining the desired production, the feed apron should be slowed down slightly. This will increase the production by a fact which is generally not realized or understood. The feed apron carries the stock forward to the lifter apron where it is caught and lifted up. The comb roll detaches the excess stock and drops it back into the hopper. The combination of the three operations gives the stock a rolling tumbling motion rotating in the same direction as the lifter apron. As the direction of the movement of the stock is the same as the movement of the lifter apron, the pins of the lifter apron do not get a strong purchase on the stock. Many clumps of fibers will not be held firmly enough and will fall back into the hopper before coming into contact with the comb roll. By slowing down the feed apron the rolling motion of the stock is reduced so that the resistance of the stock to the pins of the lifter apron is increased. The greater resistance enables the pins to penetrate more deeply and firmly into the masses of fiber so that there will be more stock carried to the comb roll at all times. The advantage of using this method of increasing the production is that the distance between the comb roll and the lifter apron is still the same, and the clumps of fiber passed forward and delivered from the machine will still remain the same small size. This is in contrast to the third method of obtaining a higher production of the feeder, which is by increasing the distance between the comb roll and the lifter apron. This larger setting will produce a higher amount of stock passed forward per hour but it will be at the expense of a loss of opening accomplished, for the clumps of fibers will be larger.

Under average mill conditions it will be found that the feeder will operate most efficiently when the comb is set from one-half to five-eighths of an inch from the lifter apron. If a comb roll is used the distance will be from three-eighths to one-half of an inch from the lifter apron. The comb roll is generally operated at speeds ranging from 110 to 200 r. p. m. The doffer roll should be adjusted so that the leather blades will just touch the pins of the lifter

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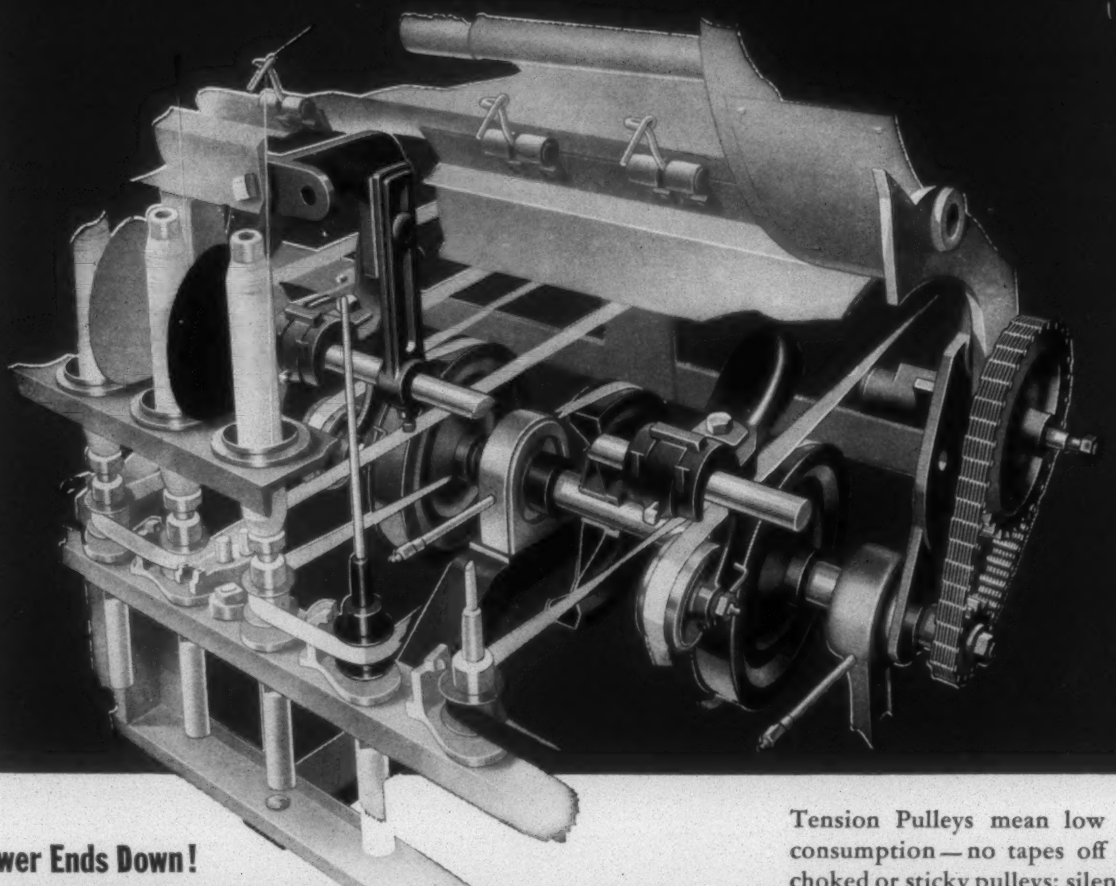

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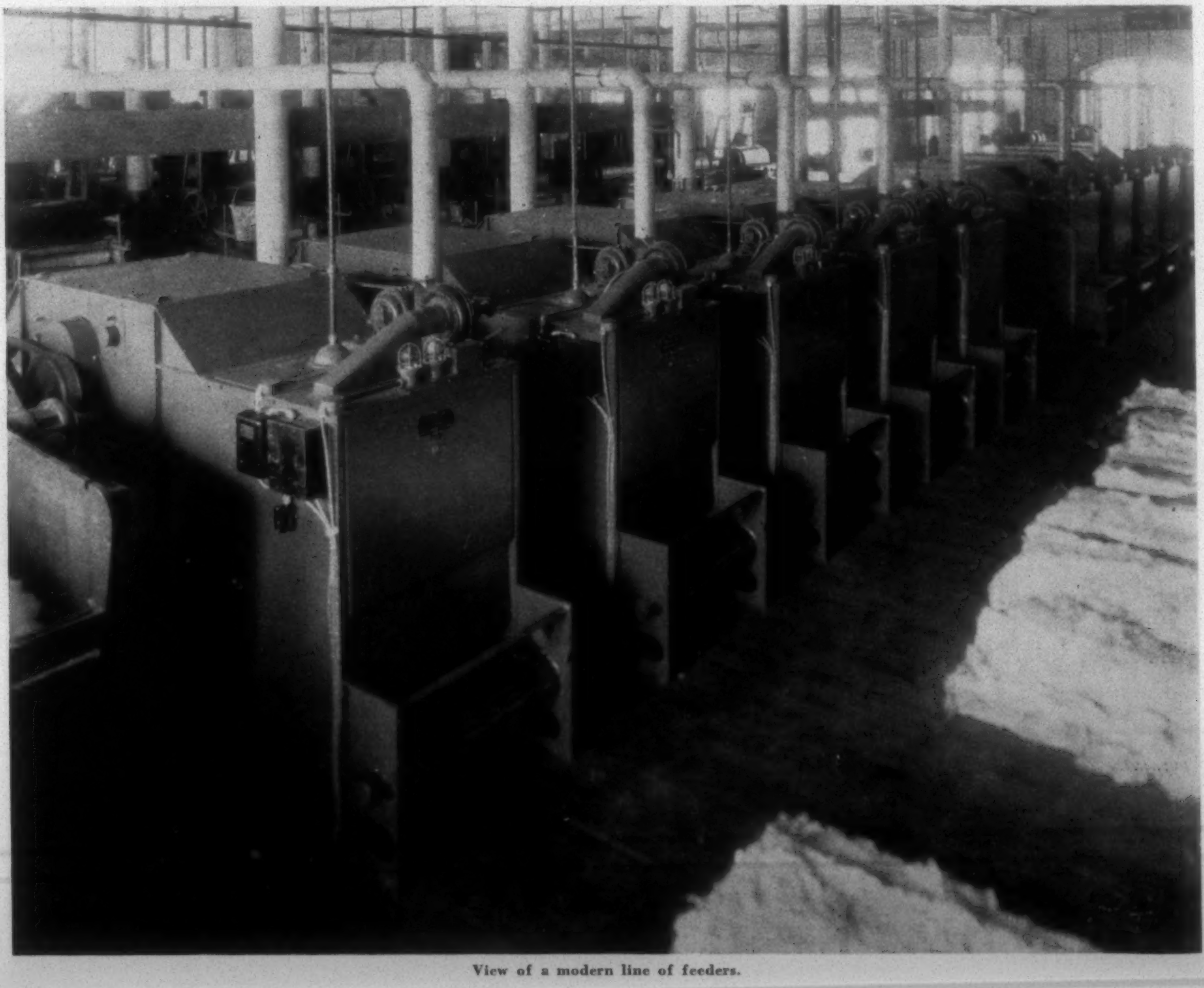
apron and should be set exactly parallel to the pins. The doffer roll is usually run at a speed of approximately 300 r. p. m. These figures are not absolute by any means for the different conditions which are to be found in different mills processing different varieties of fiber will require changes of speeds and settings. The figures can be used as a bench mark to begin experimenting with for the ultimate adjustments which will enable the feeder to operate at its highest peak of efficiency and performance must be determined in the mill by a systematic method of trial and error.

The feeder may be equipped with either a comb roll or a comb. The comb is a roll which is fitted with six blades, each blade carrying pins one inch apart along the outer edge. The comb roll is generally used on feeders which will process cotton or fiber which is not over 1$\frac{9}{16}$ inches long. The comb, or comb stripper, is in the form of a steel cross piece extending the width of the lifter apron. The cross piece is fitted with two sets of pins. One set of pins are large and strong and are set about one inch apart and are called upon to do the heavy work of separating the large masses of fibers. Located behind this row of pins is a fine tooth comb which strips the smaller groups of fibers from the lifter apron. The comb is given a reciprocal motion as it is driven by a shaft located off center from the driving pulley. The length of the stroke may be regulated by moving the shaft at the point at which it is attached to the comb arm. The comb is preferred to the comb roll when processing waste, rayon, or other long staple fibers which have a tendency to wrap around the comb roll.

The feeder is a comparatively simple machine to adjust and to maintain. Most of the feeders which are built today are equipped with anti-friction bearing on all shafts that have to be greased about every six months.

The aprons should be inspected periodically for signs of stretch and should be adjusted to the proper tautness. An apron which is properly adjusted will be taut so that the weight of the stock will not cause it to sag; however, it should not be pulled so tightly that an undue strain is put upon the bearings. The apron guide pulleys and driving pulleys should be inspected frequently as they must be kept free from accumulations of waste and fiber. Any such accumulation will serve to enlarge the diameter of the pulleys and so cause one side of the apron to travel faster than the other. This will cause the apron belts to stretch and will distort the apron, causing uneven feeding.

There is still one more important part of the present feeder which has not been discussed, the feed control. The ultimate aims of the opening and picking process is to produce a lap which is well cleaned, without masses of tightly entangled fibers, and which is even. The evenness of the lap is of prime importance. The picker lap is fed to the card where it is drawn out about 130 times its original length. A section of the picker lap which is thin for one



View of a modern line of feeders.

THIS IS NO. 68 OF A SERIES ON

GETTING THE MOST FROM WINDING

LEESONA*

Information about winding designed to show improvements in winding equipment and new ideas in the winding operation

EMULSION ATTACHMENT

For Roto-Coner*

Uniform moistening of the cotton yarn is achieved on the Roto-Coner* by means of an attachment which rotates the emulsion rolls at constant predetermined speeds.

The power to operate the rolls is taken from the cam shaft which has an approximate speed of 40 rpm, and is reduced by gears to two sets of driving sprockets (A in Fig. 2), one for each side of the machine. These driving sprockets are connected by chain to sprockets (B) on the emulsion roll shafts.

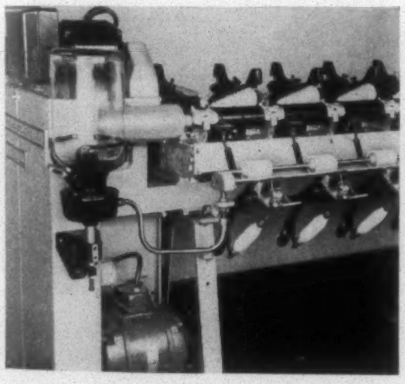


Fig. 1 Roto-Coner Emulsion Attachment, showing bottle mounted at head end, trough and rolls.*

There are three driving sprockets and three driven sprockets for each side of the machine. The ratios between driving and driven sprockets are 1-1, 5-3, 3-1. Since the gearing gives a driving sprocket speed of 9 rpm, the speed of the emulsion rolls can be 9, 5.4 or 3 rpm. The chains are easily changed from sprocket to sprocket as they are run rather slack and are provided with idler pulleys. (This arrangement also simplifies levelling and alignment of troughs and rolls.)

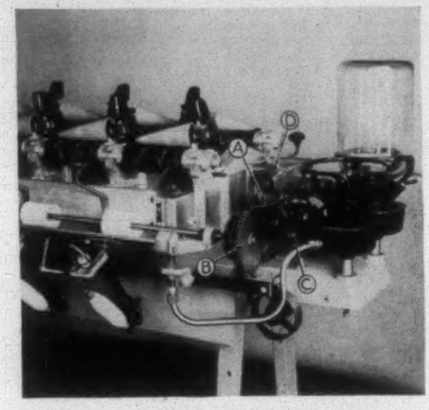


Fig. 2 Driving arrangement for Emulsion Attachment at remote end of machine (with gear housing removed). Note sturdy construction.

An arrangement of twin meshing gears—one on each driving sprocket shaft—provides a choice of emulsion roll rotation — with or against the yarn. The shafts on which the driving sprockets are mounted are arms of a "reversing lever", and this can be swung, after loosening a screw (C) from one side to another to allow either of the two gears to mesh with the cam shaft pinion (D). If the gear at the right of the reversing lever (when facing the drive head) is in mesh with the pinion, the rolls will turn with the yarn; if the other gear is in mesh, they will turn against the yarn.

With the roll running in the direction opposite to the yarn, the yarn naturally will pick up more emulsion than when running with the yarn. This fact provides a slight differential for each speed.

The mounting of the trough provides for both up-and-down and end-wise adjustment of approximately 1 in. each so that the entire trough can be given a true level and alignment from end to end. The machine itself should, of course, be in perfect level and alignment. Brackets for the emulsion bottles are provided with adjustment screws by which they are brought to the correct height. (Partially filling the bottles with water helps in establishing the level.)

The bottles may be mounted either at the head end on the sides of the drive head or at the remote end on the drive bracket. For a full-length machine, four bottles are recommended.

A splash guard, mounted at the back of the trough, drains excess moisture that drips from the yarn back into the trough, and the machine is, accordingly, kept clean.

*®

March, 1948

3-7-5

"THERE'S A UNIVERSAL WINDER FOR EVERY TEXTILE NEED"

UNIVERSAL LEESONA WINDING COMPANY

PROVIDENCE BOSTON PHILADELPHIA UTICA CHARLOTTE ATLANTA CHICAGO LOS ANGELES MONTREAL and HAMILTON inch will become a length of sliver which will be tight for 130 inches. Subsequent doublings will tend to reduce the unevenness but will not completely obviate it. In order to spin yarn which is very even it is necessary to make picker laps which are also even.

The picker is built to incorporate several mechanisms whose purpose it is to maintain a flow of stock which will be formed into an even lap. However, the picker cannot correct all of the unevenness and must be aided by controlling the flow of the stock which is fed to it. This control should commence not at the feeder, but before it. The feeder will deliver a uniform amount of stock, at all times within reasonable limits, if the hopper is kept uniformly supplied. The first step in attaining this end is to instruct the operator of the machines to feed the stock into the feeder in medium small lots. There is a tendency on the part of most operators to throw a large pile of stock into the feeder and then relax until it is almost all used up. This is a very poor policy as first the feeder is overloaded and delivers too much stock onto the feed table, and then begins to deliver too little. The installation of a feed regulator on the feeder will not wholly compensate for this.

Several mills have relocated the position of the opening room in order to eliminate unevenness caused by irregular feeding. The general plan is to situate the opening machine on one floor with a mix room directly above. The mix room is completely empty of all machinery and is sufficiently large to permit laying out large mixes for better blending. The mix is arranged around the mouth of a chute which is built into the floor and leads down into the opening room below. The chute terminates at a point directly over the feed apron, or extended apron, of the feeder and is constructed with a built-in door. The door is connected to the feed regulator of the feeder so that it will open and feed the stock only when the machine is capable of processing it without overloading. The operator in the mix room simply peels layers from the bales of the mix and drops them into the chute. Lights in the mix room are connected to the feed regulator, and indicate when the chute is nearly empty and must be replenished with stock.

The feed regulator may be applied to any feeder. The regulator is moved by a shaft extended across the width of the hopper at the top and to which is attached three long steel fingers, or rakes, extending downwards toward the feed apron. When there is a sufficient supply of stock in the hopper the rake is forced back. This shaft of the rake is connected to a series of levers which shifts the diving belt of the feed apron to a loose pulley and stops the feed. When the supply of stock becomes low the rake swings, shifts the belt, and starts the feed again. Lights may be connected to the feed regulator to indicate when it is necessary to feed more stock from the bale onto the feed apron.

It may be seen that the feeder accomplishes four purposes. First, it makes available a means of attaining a more even mix. Second, it begins to open the stock more completely. Third, the removal of waste and foreign matter from the good fiber is carried out without damaging or weakening the good fiber. Fourth, the feeder lays the foundation for the spinning of yarn which is clean, strong and even.

Performance Of W. & S. Pin Drafter

REPORTS of reduced costs and improved quality of fabric from mills using the Warner & Swasey Co.'s first 250 pin drafting machines indicate that this pioneer machine-tool builder may be headed for a career of service to the textile industry which will compare favorably with its 67-year record in precision metalworking fields. First of several Warner & Swasey textile equipment projects to reach volume production, the new machine eliminates conventional operations in processing various fibers for spinning, while boosting the quality of the product being handled.

Two sets of 12 of these machines have been installed at the Cleveland Worsted Mills for some months, with 24 more units ordered to convert all processing at the Cleveland plant to the Warner & Swasey system. Eventually the company's Ravenna plant, which contributes about 40 per cent of 165,000 pounds of finished worsted yarn produced weekly, will be changed over also. Initial over-all savings of 35 per cent are calculated by Louis O. Poss, president of Cleveland Worsted, on the basis of the performance of the original set of machines, with substantially greater savings anticipated when the pin drafter's advantages are fully exploited.

The new Warner & Swasey pin drafter combines all the functions of heavy drawing in a single type high-efficiency unit, and so performs in a few steps better work than was formerly possible in a number of operations. From four to six slivers of fiber are combined and drawn out into a single sliver, while being gilled by fine-pinned fallers. Three operations through the Warner & Swasey pin drafter do to Cleveland Worsted's wool what formerly took six different operations on six different kinds of machines. Finish gilling after combing is omitted entirely, with the combed product going directly to the first operation of pin drafting.

Improved processing is underlined by a significnat reduction of doublings. At Cleveland Worsted, the first finishing gilling operation formerly integrated 36 slivers into one; the second operation took six slivers from the first, producing one—and so on. Result was 972,000 doublings to produce a satisfactory spinning yarn. By contrast, the pin drafter set-up cuts the doubling to 480, and turns out what Cleveland Worsted officials call "the best yarn we ever had." Detailing the quality improvements effected, mill men point out that the Warner & Swasey yarn product is loftier and more resilient. Only 14.2 thousand yards of spun yarn are warped on beams for the looms, where 15,000 yards formerly were contained in the same diameter due to the loft of yarn. Effect on set-up time is negligible

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A-3

TUFFER
CARD CLOTHING

IMPROVES PRODUCTION ALL ALONG THE LINE

Substantial production savings are claimed for the newly-developed Warner & Swasey pin drafter, used to ready yarn for spinning. The machine shown here is one of 24 now in operation at Cleveland (Ohio) Worsted Mills Co.

(a single beam keeps a loom supplied for almost a month), but the appeal the finished cloth conveys to a buyer's sensitive fingers is far from negligible. A cleaner product is delivered, as well, with the machine knocking out minute bits of foreign matter which slipped by earlier processing.

High-consistency output means a stronger yarn, and stronger yarn means fewer time-consuming breakages in spinning and subsequent winding and weaving. A production increase of 25 per cent has been noted in Cleveland Worsted's beaming operations, for example, where "Warner & Swasey" yarn is wound on large warp beams for the looms. In actual weaving, certain "patterns" are no longer as unpopular with loom operators as they once were, because fewer yarn breakages have cut down production differentials which formerly existed. Fewer machines to do the same work means that scarce mill hands are freed for other work. Three operators process the same poundage which five persons formerly produced. Likewise, reduction in machinery "creates" extra floor space for other projects. Rounding out the savings picture, Cleveland Worsted points out that fiber waste has been substantially reduced with the new processing system. The new machines contain, process and deliver virtually 100 per cent of the material input, with reduced fiber breakage and insignificant fly waste.

New Synthetic Yarn Makes Bow

Officials of Carbide & Carbon Chemicals Corp. last month formally presented to the textile world their new yarn, Vinyon N, made from synthetic resins, which is now in production at the pilot plant of the firm in Charleston, W. Va. The yarn was introduced by high officials of the company at an all-day meeting arranged for editors and publishers of textile periodicals and educators connected with textile schools and colleges. Carbide speakers listed and demonstrated the properties of Vinyon N fibers as: (1) resistant to most chemicals and solvents; (2) fire-resistant and will not support combustion; (3) water-resistant and therefore quick-drying; (4) good electrical properties; (5) readily dyes; (6) may be fabricated on standard textile equipment; (7) resistant to insects, fungus and mildew; (9) thermoplastic.

It is believed that the new yarns will eventually find a demand in women's hosiery, however, up to now women's seamless and full-fashioned hosiery has not been so acceptable a product as hosiery from certain other synthetics. The yarns have been knitted on full-fashioned, rib, tricot and plain circular machines. Carbide officials explained that the firm wishes only to supply the raw materials and leave the actual manufacture of cloth to others. The corporation plans to make yarns in the new yarn development building in small quantities to furnish the textile industry with supplies for test and small production.

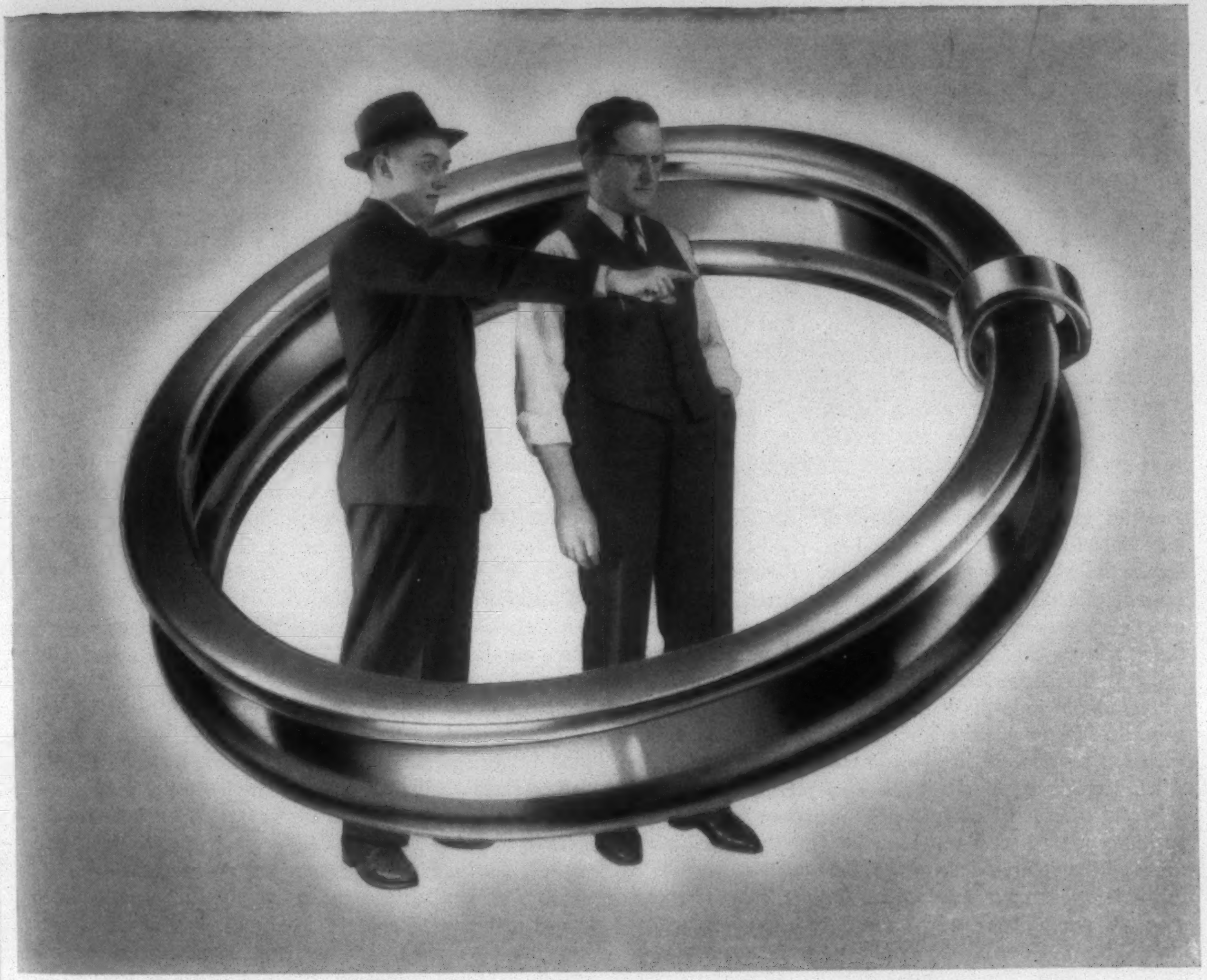
Virginia-Carolina To Produce New Fiber

Virginia-Carolina Chemical Corp., probably in May, will begin commercial production of a vegetable protein fiber at its newly acquired plant in Taftville, Conn. Initial production will be in two deniers, 1.5 and four, officials explained, and will be made in all required staple lengths. The price of both deniers will be $1 per pound and the new fiber, to be known as Vicara, will be sold on specifications setting forth physical and chemical standards which will be met at all times. The Taftville plant has a capacity rating of ten million pounds per year but officials explain that it is uncertain when this rate would be attained. A testing laboratory report regarding the new fiber follows:

Method of manufacture: synthetic fiber is made by extruding a protein spin solution through a spinnerette followed by coagulation, stretching, curing, cutting and drying. Tensile strength (grams per denier): dry (normal): 0.95 to 1.05. Wet: 0.5 to 0.6. Elongation at break: dry normal): 30 to 35. Wet: 30 to 35. Elastic recovery: 95 per cent at two per cent stretch. Total water absorbency: 20 per cent. Specific gravity: 1.24. Regain: 13 per cent at 65° F. and 70 r.h. (74° F. at 65 per cent r.h. preferred). Burning rate: relatively slow. Effect of heat: decomposes at 450° F. Effect of age: none. Sunlight: slowly weakened. Acids: stable to weak, decomposed by strong. Alkalies: stable to weak, embrittled by heating in strong. Resistance to other chemicals: good. Bleaching: can be bleached. Solubility in organic solvents: insoluble. Affinity for dyes: can be dyed at the boil with acid or chrome dyes in the conventional manner. Resistance to moths: non-palatable. Mildew: resistant. Dry modulus: .25—wet modulus: .084.

New Method For Making Straw Into Linen

Research men at the University of Minnesota have developed, and recently demonstrated, a new and cheap method for converting flax straw into linen yarn in four or five hours. An important feature of the new method is a chemical process which removes gums and other waste material from flax fiber.



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Warp Preparation & Weaving

EVOLUTION OF AN IDEA

Part Three of a Series by H. E. WENRICH

THE future of our country lies not only in great inventions such as the gas engine, rails and radio, but also in such little inventions as the fuse puller and light blinker. Group them all together and we have that which makes America great; that which makes the American working man the best fed, the best dressed and the best housed being in the world. Regardless of many shortages or prophecies of dire disaster to our economic structure, the ending of 1947 witnessed American employment reaching an all-time peak, matched by the living standard climbing higher, and with the stupendous income of over 200 billion dollars.

The textile industry can claim its rightful share in the gainful employment of our people; it also well exemplifies what can be done under the incentives of free enterprise. All the privileges of sharing in this prosperity picture is assured to each and every one of us. Regardless of your position, you can feel you have in some measure, helped forward the interests of your fellow worker as well as furthering your own position in your particular surroundings. Greater strides can be made in retaining and increasing the seeds of our prosperity. These seeds are, obviously, the ideas that the average American is occasionally thinking up. These ideas gradually thrive and blossom into useful methods, plans and products. Many appear useless at the start; all may be somewhat sketchy, but eventually the idea shapes into workable dimensions and becomes an undisputed actuality.

In a preceding article, the thinking up of an idea and gadgeteering it into a useable device was thoroughly outlined. And also mentioned was the suggestion to stick to your own line of endeavor when searching for that elusive thought that may be the means of making your job easier. To show exactly how this plan can be helpful, the writer will keep within such line of thought and describe how one idea leads to others. You can recall how the let-off safety detector came into reality, and how it depended upon the functioning of the warp stop-motion. Let us search other possible uses for the warp stop-motion, and see if it cannot be placed into other use as precautionary measures against certain loom breakdowns.

Because of the flexibility of the electric warp stop-motions, weaving plants can improve the quality and production of their fabrics. By making additional use of the motion, other than using it merely as a means of stopping the loom on a warp end break, many imperfections and loom trouble can be prevented and eliminated.

Warp stop-motions have been in use in America's weave sheds for many years. One of the most successful is the Rhode Island electric warp stop-motion, now controlled and produced by Draper Corp., builder of some of the finest automatic weaving machinery in the world. Crompton & Knowles Loom Works, which builds such great looms as the terry cloth loom, 4 x 4s and multiple-shuttle weaving machinery, has an electric warp stop-motion as standard equipment on its modern looms. Both are excellent motions and are used in various weaving plants on every type of weave, regardless if on single, double or more ply warp constructions.

One advantage gained with the electrical motions, are their installation on older looms formally equipped with mechanical motions. Warp stop-motions reduce the number of sub-standard cuts due to various forms of cloth imperfections. Production is also increased, as the drops, placed over individual ends, tend to comb the yarn apart and prevents small stickers and entanglement of warp yarns.

Mechanical stop-motions are not as convenient nor accessible to placement of auxiliary devices as the electrical motion, but some imagination along the use of aids to the mechanical motion for the prevention of certain loom breaks or cloth imperfections, will produce some gadgets with success. Mechanical motions, however, are on the way to becoming outmoded, so no further mention will be made regarding the time-worn mechanical motions. Let us concentrate on what can be accomplished with the electrical stop-motions.

As is well known, the fundamental idea of a warp stop-motion is to stop the loom when a warp end breaks or slackens. But every weave shed can go further and get more than its money's worth if it puts into practice a program for taking advantage of the stop-motion's full capabilities. Just how can this be done?

First of all, it should be understood that any machine and therefore any motion on it, has certain limitations. An regarding how to make further use of the electric stopping or protective device for distant looms and other machines. When the loom stops, the transformer must be put on safety by the switch, otherwise a transformer will be ruined. This has frequently happened when a switch fails to function properly on a wire drop or short circuit. If not equipped with a cut-out, the transformer quickly overheats and may burn out.

Many employees, especially fixers, will get a brain storm regarding how to make further use of the electric stop-motion. Analyze such thoughts and give them a workout to prove if they are of practical value. Once an idea is proven of sound value, get it on all the machines as quickly as possible. It may be necessary to have the devices made in some machine shop, or perhaps they can be made right in the plant shop by a fixer or mechanically-experienced man. In some few instances, certain devices can be pur-

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▶On the other hand, how to bring this speeding shuttle to a smooth stop so as to prevent yarn-breakage and binder-chatter?

▶How to select and substitute a full bobbin for an empty one, and complete the transfer in 1/20th of a second?

▶How to gain and maintain a delicate balance in "sideslip" feelers (which should be always positive-acting, yet never sever the yarn)?

▶How to provide "fingertip" clutch-operation, yet reduce adjustments, bang-offs, parts-breakage?

These studies and more have been detailed on these pages during recent months. But these are just a few of the projects in progress in C&K's Engineering Research Laboratories, each project aimed at the end-result of *increasing your own weaveroom efficiency and profit*. And to make sure of its value to you, every new idea produced by these studies . . . in method, material, or design . . . must answer yes to the challenge of *at least one* of C&K's "6 Sentries":

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2. Does it increase Ease of Loom Operation?
3. Does it improve Quality of Fabric?
4. Does it decrease Cost of Maintenance?
5. Does it improve Continuity of Operation?
6. Does it improve Appearance and Utility?

And there, we submit, is the *soundest future profit-protection* you can have!

Crompton & Knowles Loom Works

WORCESTER 1, MASSACHUSETTS, U. S. A.
PHILADELPHIA, PA. • CHARLOTTE, N.C. • ALLENTOWN, PA.

CROMPTON & KNOWLES JACQUARD
& SUPPLY CO., PAWTUCKET, R. I.

BRIDGING THE GAP between Today's Knowledge . . . and Tomorrow's Looms chased for the direct use on the loom in connection with the electric warp stop-motion.

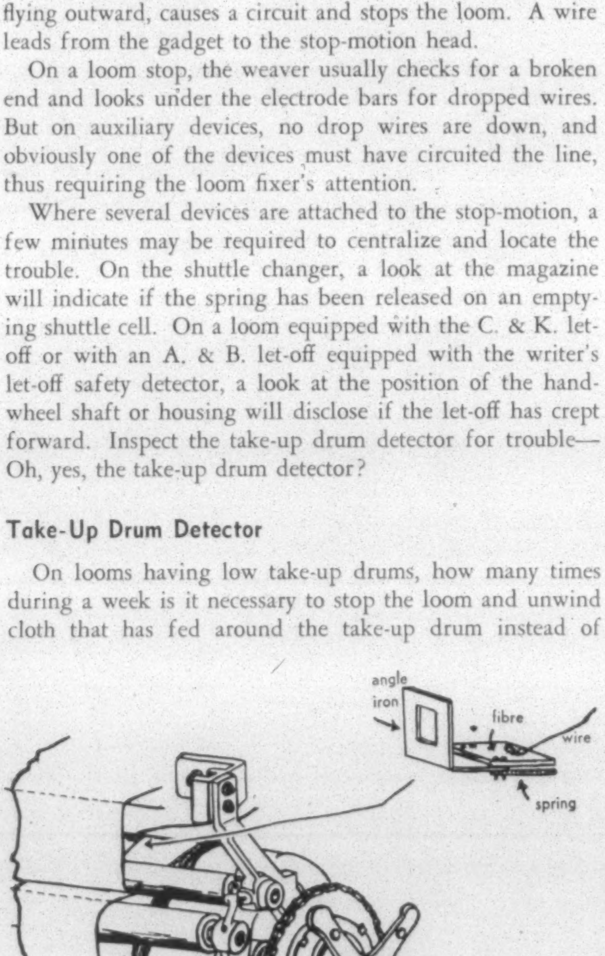
Such a device as the foregoing can be secured from Crompton & Knowles Loom Works and is used on the shuttle-changing loom. This is a simple gadget attached to the back shuttle cell as a means of preventing broken magazine cells and related parts. Shuttles are placed in two vertical cells and drop according to replenishing requirements as the filling empties. As the back cell empties, and the last shuttle remains, the shuttle is liable to turn edgewise on the change and get caught by the lay end passing beneath. With the device secured to the back, as the shuttle drops into position for transfer, it releases a spring, that flying outward, causes a circuit and stops the loom. A wire leads from the gadget to the stop-motion head.

On a loom stop, the weaver usually checks for a broken end and looks under the electrode bars for dropped wires. But on auxiliary devices, no drop wires are down, and obviously one of the devices must have circuited the line, thus requiring the loom fixer's attention.

Where several devices are attached to the stop-motion, a few minutes may be required to centralize and locate the trouble. On the shuttle changer, a look at the magazine will indicate if the spring has been released on an emptying shuttle cell. On a loom equipped with the C. & K. let-off or with an A. & B. let-off equipped with the writer's let-off safety detector, a look at the position of the handwheel shaft or housing will disclose if the let-off has crept forward. Inspect the take-up drum detector for trouble—Oh, yes, the take-up drum detector?

Take-Up Drum Detector

On looms having low take-up drums, how many times during a week is it necessary to stop the loom and unwind cloth that has fed around the take-up drum instead of around the bottom take-up roller. This trouble is run into more on looms where long cut-offs predominate. As you will readily see, when cloth feeds onto the take-up drum, it continues wrapping around and around and eventually rolls 50 or more yards around the drum that is extremely difficult to unwind and reroll onto the bottom roller. In some few instances, where cloth continues to wind around the drum, it becomes so heavily packed that the held-down springs are compressed so tight something must break. On most breaks, the take-up being the weakest, will usually snap off at one of the take-up gear bearings. This trouble requires entirely too much lost time to run the loom without some protective feature.



Bolt gadget to breast beam so spring nearly touches cloth on drum. If cloth feeds onto drum, additional layers press spring against contact and form circuit, thus stopping loom.

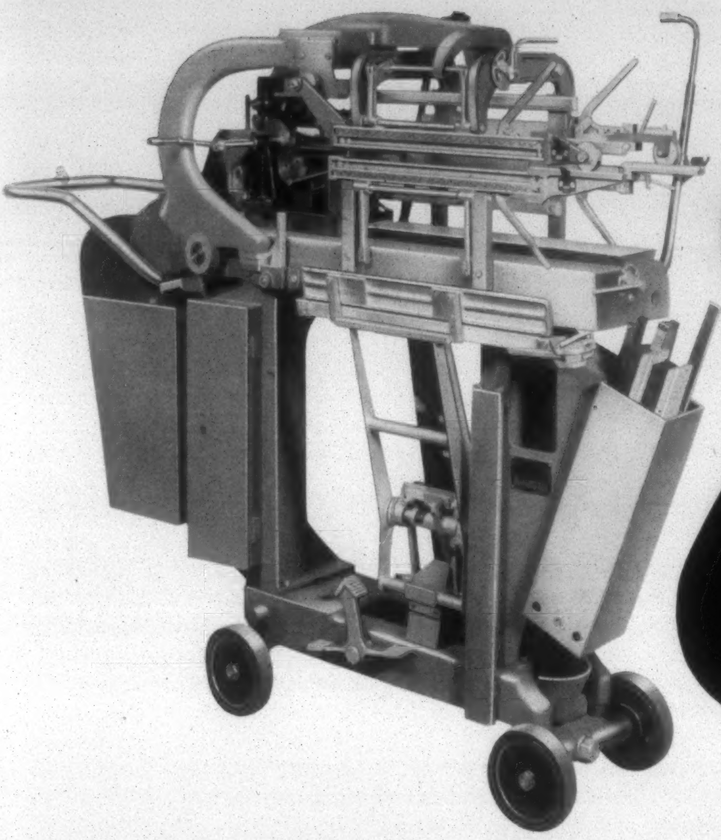
Shown in the accompanying illustration is the magazine side end of the modern C. & K. loom. This is the friction take-up side. During bobbin changes, the cutter may not be set properly and long tails feed along the edge. If the friction is set light and the tails wind around the take-up drum, they are liable to pull the cloth into the drum and start it winding onto the drum instead of passing on down to the bottom take-up roll. A more frequent occurance, however, is when the bottom take-up roll becomes filled and the large roll of cloth touches against the under side of the take-up drum. This acts as a hindering force to the usual take-up, and actually pushes the cloth back up to feed under the top roller and on around the take-up drum.

To unwind cloth from the take-up drum, it is necessary to block the pull and hold pawls from contact with the pickwheel ratchet. Again, it may be necessary to loosen the intermediate gear on the take-up and drop it from connection with the drum gear and ratchet pinion. Regardless of how the cloth is unwound from the take-up drum and rewound around to fall on the floor (with the cloth roll full, it is necessary to drop the excess cloth on the floor until a cut-off is made and piece removed), the task is by no means an easy one.

So why depend on conventional methods, when a simple gadget will eliminate so much trouble. Avoid difficult situations and costly breakdowns by placing another protection device onto the electric warp stop-motion.

Knowledge of insulation can, and is, acquired by studying various shapes, designs and connections. Most any fixer knows that an electric device used for the purposes of detection, must be insulated in some manner. Thus when a certain part breaks or builds up pressure, a circuit is closed and electric power is brought into action. Insulation can consist of wood, fiber or plastic or in some few instances, paper. A simple gadget used as a contacting device, is to secure a length of wire to a strip of fibre, secure the fibre to the machine, and make use of a springy segment to press down gradually onto the attached wire to form a circuit. It is really surprising how different designs can be, coming from two or more persons working with but one idea in view. Just to test this assertion, pass on the idea of the take-up drum detector to several fixers or foremen in the weave room, and suggest they work out some device to stop the loom when cloth starts winding around the take-up drum instead of down where it should wind on the cloth roller. Some such device may be a big improvement over the gadget shown in the illustration and to be attached to the loom where it can be fitted in the most logical position.

The suggested gadget is merely a strip of metal to be bolted to the breast beam. Fibre is riveted onto one end on one side and a short length of steel spring on the opposite



BARBER-COLMAN
MODEL "LL"
Portable
WARP TYING MACHINE

THIS "UNIVERSAL" MACHINE TIES IN EITHER PLAIN OR LEASED WARPS WITH EQUAL SPEED AND EFFICIENCY

Barber-Colman Model "LL" Portable Warp Tying Machine set up to tie in new warp from a flat sheet.

The same machine as above, but now loaded for tying-in leased warps, as shown by the lease rods.

Under the conditions of modern styling, many mills need versatile equipment to handle frequent changeovers between filament and spun synthetic yarns. The Barber-Colman Model "LL" Portable Warp Tying Machine is extremely useful under such conditions because of its adaptability. It is a combination machine, with interchangeable selector mechanisms to select from either an end and end lease or a flat sheet. A trained operator can make the necessary changes in less than ten minutes. The production rate when tying from an end and end lease is the same as when tying from a flat sheet. Under average conditions, a good operator can tie up to 4000 ends an hour, or better. This machine is particularly valuable in mills where both flat and end and end leased warps are coming through, and where the use of separate machines is not justified as they would not be utilized to their fullest capacity.

AUTOMATIC SPOOLERS • SUPER-SPEED WARPERS • WARP TYING MACHINES • DRAWING-IN MACHINES

BARBER-COLMAN COMPANY
ROCKFORD • ILLINOIS • U. S. A.
FRAMINGHAM, MASS., U. S. A. GREENVILLE, S. C., U. S. A. MANCHESTER, ENGLAND

side, using the same rivets. On the opposite end of the short strip of fibre, the wire connection is bolted fast, the opposite end running down along the take-up stand and back to the wire coming from the electrode head to the solenoid, the two wires scraped, connected together and taped. This forms a firm connection.

Has your fixer came up with an idea on improving this first crude gadget for the prevention of cloth feeding back around the take-up drum? Well, here is another. Merely attach an insulated segment down on the right side loom stand near the bottom cloth take-up roll. As the roll handwheel moves around it presses against the spring segment on the insulated strip. If for some reason the cloth starts feeding back around the drum, the pull will start reversing the roll handwheel, and the spring segment is pulled backwards, contacting a second spring and making contact in closing an electric circuit and stopping the loom.

The foregoing methods are the elements that places an idea into a suitable and workable gadget. Just attach to a suitable position, and as the cloth starts reversing, the loom is brought to a stop until the trouble is corrected. Simple, isn't it?

Actual determination of placing detector devices for any particular application depends upon the type of machine and space available for adjusting. No gauges are necessary, as common sense will play a more important role in placement. Location must be such that later corrections within a few seconds can be made without the need for taking parts off to make trifling adjustments. And that is one of the important points in thinking up ideas—the need for simplicity when repairs or adjustments are required.

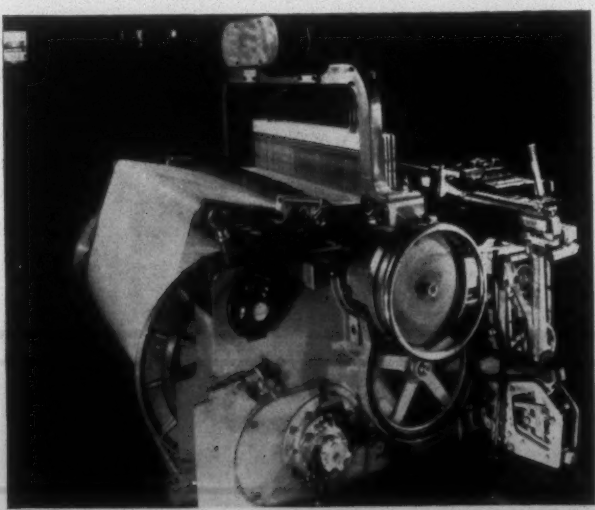
On the gadget shown, the springy segment can be bent slightly if it becomes necessary. Open space should approximate 1/64th of an inch clearance between the end and the contact point for circuiting the device. Although if parts are too light, vibration could cause false loom stops.

False loom stops would of course run a fixer ragged. So it becomes necessary to prevent such stops by making sure auxiliary devices are properly placed and of suitable materials to be long-lasting. These devices are highly desirable as a means of saving time and preventing defective cloth, and should be made of the best materials available.

There is a great demand in every shop for saving time and materials, but there is a greater demand for increasing production and beautifying the product. Mechanics may not be able to beautify the product, such as the loomfixers keeping looms at peak efficiency on satins, twills and apparel of various yarns. But then, designers and fashion experts would be unable to step into a weaving plant and keep a section of looms running satisfactory. To each, his own trade. Let the designer, the garment maker, the converter and the finisher turn out a beautiful fabric that will keep the worker employed at the machines, and the worker will think up the gadgets necessary to keep production at high efficiency so he in turn can keep the designer and others in other lines of endeavor likewise gainfully employed.—*(To be concluded.)*

Details Of Kellogg Loom Announced

GREATER over-all efficiency through increased sustained speed, lower maintenance cost and longer life—that is the promise of a new cam-operated loom, developed by the M. W. Kellogg Co., engineers and fabricators of industrial equipment. Details of the loom were made known this month in an announcement by H. R. Austin, president of Kellogg, who stated that the loom is now in commercial production at the Kellogg shops in Jersey City, N. J.



Close-up photograph of the new Kellogg loom, newest venture into cloth weaving machinery.

In addition to turning out several thousand looms yearly, present production facilities also serve a pilot line for a progressive assembly system now in course of installation. Loom production is under the direction of Alexander Kidd, vice-president in charge of manufacturing, who has directed the loom development program since its inception. The first shipments have been delivered to cotton and rayon mills where these looms now are in operation; it is expected that the new equipment will be equally applicable to certain of the other textile weaving divisions as well. Initial deliveries are in the 40 to 60-inch size range but the loom will be available in all widths.

One of the major advantages of the new loom, the company stated, is that it is designed on the unit system, with each basic movement being an integral unit in itself. All units are precision manufactured and calibrated which is the basis for the increased speed of operation and also serves to reduce wear and maintenance, thus contributing to longer life for the machine. Since the individual movement assemblies are interchangeable, repairs and recalibration can be made in the plant machine shop, which reduces down time in the loom room to a minimum. Constructed of the most modern materials and equipment, the loom utilizes largely forged and machined parts, as for example cut gears.

In selecting the materials, Kellogg drew upon the company's extensive research and metallurgical explorations and experience in the last war. Among the materials and

Production assembly line of new Kellogg loom at the Jersey City (N. J.) Works of M. W. Kellogg Co. Sub-assembly lines at the left feed precision units to the main line.

equipment used in the loom are various original products developed during the war, including new alloy steels, new white metals and the latest types of high precision bearings. The design of all movements on the loom are believed to be entirely new and unique. The controls on the loom were all specially developed. The weaving machine employs the most modern electrical control devices. Kellogg's development of instrumentation for supersonic equipment provided the technical background for the design of these devices. Exhaustive studies of actual loom operation in which warp tension was given particular attention determined the actual application of the devices.

Sustained Speed Increases Obtained

Designed to operate production-wise at appreciably higher sustained speeds than existing equipment in the industry, the loom has an additional wide speed tolerance factor, permitting operation at considerably higher speed than is recommended for standard practice. As an example of its capacity may be cited the claim that increases of 30 to 40 per cent over reputed averages in the industry are obtained on cotton gray goods. This capacity for higher speed, together with the lower maintenance and reduced down time, naturally contributes to improved over-all operating efficiency and economy, the statement points out.

Although it has only been on the market a very short time, the loom is said already to have built for itself enthusiastic acceptance among weavers. This favorable reception is directly traceable to the fact that the loom was planned to meet the specific technical and economic needs of weavers today. "It might be said," the statement continues, "that the new Kellogg loom really developed from within the textile industry itself. Many of the foremost textile weaving companies co-operated closely with Kellogg in establishing the specifications of both individual movements and over-all operation characteristics. As a result numerous vital suggestions were made by the weavers themselves—the technicians on the floor of the mills."

While insisting on a design that would incorporate the newest most efficient machine principles Kellogg nevertheless adhered to the fundamentals of accepted standard loom operation. This is an important advantage, since it produced a loom which, while vastly more efficient, still conforms to standard operating practices and does not require retraining of the operating personnel of the weaving industry. Actually, any weaver familiar with standard equipment can immediately operate a Kellogg loom. Tests are said to have shown that the new loom is in fact more easy to operate because of two advantages: (1) the control of the new loom is simpler and more modern; and (2) all the major repair work is shifted to the machine shop, thus permitting the weaver on the floor to give uninterrupted attention to producing the cloth.

Another factor contributing to the early success of the loom is the rigorous program of tests which it has had to meet prior to introduction to the industry. Every design principle incorporated in its layout was submitted first to exhaustive tests; oscillographs checked each operation; strain gauge readings were taken at every step in the development work. In order to eliminate backlash and to synchronize the timing of all interdependent actions, high speed cameras (3,000 frames per second) made photographic checks of all motions.

The operation of prototype looms under extremely rigorous conditions—equivalent to the entire life of a loom in normal mill service—in Kellogg's loom laboratories, was a vital part of the early test program. Other prototype looms were actually installed in mills nearly two years ago. "Thus," the statement points out, "the new loom has already proven itself in mill operation."

Kellogg's entry into the field of textile equipment manufacture is part of a broad picture of expansion, resulting from the wide experience and added knowledge acquired by the company during the past decade. The extensive research conducted in the steadily enlarging Kellogg laboratories and pilot plants at Jersey City, both prior to and particularly during the last war produced a deep fund of knowledge on materials of all types and description and design not only of chemical processing but also of machine motion.

The over-all activities of the M. W. Kellogg Co. have widened so extensively during the past decade, not only in petroleum refining and chemical processing where the company has a world-wide reputation, but also in the very newest scientific engineering divisions, that the full scope of its activities may not be generally known. The range of activities today, in addition to the above, includes: manufacture of high temperature alloy steels by an electrical ingot process; design of plants for the manufacture of gasoline from natural gas; development of rocket cases; and outstanding new developments in fabrication including the development and production of gas turbines. Through its subsidiary, the Kellex Corp., and its own special projects department, Kellogg has taken a leading place in development of rocket missiles, guided missiles, jet propulsion and atomic power. The company's metallurgical laboratories, which played an important part in the development of the loom, are rated among the most advanced and complete in the country.

When the company decided to expand its manufacturing operations, surveys were made in several industries where the creation of new machinery from improved engineering principles might profitably be exploited. "The textile industry," the statement adds, "was one of those industries surveyed and the Kellogg loom is the first application of such engineering knowledge to the needs of the textile industry."

The scope and importance of the research that preceded development of the loom may be indicated in the fact that it drew upon the entire M. W. Kellogg Co. organization, including physical chemists, mechanical and chemical engineers, electronic experts and metallurgists—the company's corps of such specialists totaling close to one thousand.

Biltmore: One Strand At A Time

BILTMORE INDUSTRIES, INC., located at Asheville, N. C., still insists on making its woolens one strand at a time. President and General Manager Fred L. Seely, Jr., young war veteran who recently has taken over the business since the death of his father, says he has to be very careful not to startle half a million customers with any brash manufacturing notions. For almost 50 years Biltmore has turned a lackadaisical eye toward all modern machinery used in weaving wool into cloth. The largest hand-weaving establishment in the world, Biltmore Industries originally included many other types of handicrafts, but gradually the fabrication of woolens dominated the enterprise. Processing the fiber is fairly conventional up to the weaving stage. Mr. Seely explains that the fiber is not subjected to stress of any kind. Washing temperatures are kept low, the wool is dyed by hand, and then the weavers fabricate the cloth.

Old-fashioned "pole dyeing" with alizarine colors takes place in wooden kettles, with each bath agitated by hand.

One of the few operations performed by power machinery at Biltmore Industries is carding.

Weaving by hand is carried out on looms made by the company. The weavers develop special aptitudes for certain designs, such as herringbone, basket or diagonal weaves. The material woven by beginners is called "Orphans Cloth" and is donated by Biltmore to charitable institutions.—*Wide World Photos.*

Materials Handling

Standardization Of Equipment

By DAVID H. BURTON, Engineer, Bakelite Corp., Bound Brook, N. J.

FROM the outset the subject, "Standardization of Materials Handling Equipment," proves to be a controversial one. In fairness to all we must admit that there is justification for argument both for and against a rigid program of standardization. However, if we accept the adage that "Experience is the best teacher," we can best approach the subject by a careful consideration of all contributing factors, both for and against such a program.

Through contact with a number of concerns, several of which were large in respect to the number of pieces of materials handling equipment they use, it has been determined that many companies have purchased a great variety of power fork lift trucks and platform trucks of a variety of design and sizes, all to do practically the same type of work. Upon inquiring into the reasons behind these assortments the following explanations were given:

First and undoubtedly foremost — *the war* and the attendant shortages and priorities that went with it. The fact is that we all had to grab anything that was available during those years of unprecedented activity. Second — salesmanship. We all recognize that a persuasive salesman can and often does influence a change in practice. Third—experience rating. Many ill-advised and inexperienced people purchase equipment with too little knowledge of its life expectancy and its capacity limitations. As a result of this, the actual users of that equipment complain of its performance, the high maintenance costs, efficiency, etc., until they resolve that in order to play safe they will purchase some other make next time. Fourth—price. Recognizing that the materials handling equipment field is a highly competitive one, we must appreciate that this is no small factor, at least initial sales, though it is doubtful if "price" effects follow-up or repeat sales, nearly as much as the initial purchase of the equipment.

Of the various individuals spoken to and who are interested in the subject, each has indicated that he recognizes the desirability of "standardization" but at the same time, each also reflects that he'd be less interested in this subject if he had not first accumulated a variety of units, formed his own opinions and then experienced the problems that follow. It would appear then that some means of communicating these experiences to one and all would serve a useful purpose. It should be emphasized at this point that this discussion is not concerned with any specific design or make of equipment that may be adopted, but primarily and specifically with the merits of standardizing in the adoption of a single design or make as opposed to a cross-section of several.

These, then, are a few of the arguments in favor of standardization. First, and I believe foremost in all our minds, is the all important factor—safety. Unlike the automobile manufacturers, materials handling equipment manufacturers have failed to standardize on operating controls or positions. We find that certain makes of trucks steer in opposite direction to the natural tendency to turn the wheel. Some are left hand and some are right hand drive. One type operates in speed by a pedal similar to the auto accelerator, while others operate by circuit breaker control with either left or right hand operation. One unit tilts by *lifting* a lever and elevates or lowers by *pulling* another lever. (A direct opposite to the natural tendency for such action.)

Undoubtedly each of the manufacturers of these units would justify their design and operating controls by technical explanations, but you and I as supervisors are charged with the responsibility of training men who have never handled equipment of the type to which we refer and of teaching them, in as brief a time as possible, to operate that equipment at speeds of from six to eight miles per hour (sometimes faster), in congested areas, narrow aisles and busy traffic corridors.

Safety Problem

How can we honestly feel that our warehouse crews are operating safely when we furnish them with an assortment of equipment on which some of the controls work in direct opposites? An answer to this question might well be to assign each man a unit, teach him to operate that one and no other. But this immediately reduces the flexibility of a warehouse crew, and most warehouse crews derive their efficiency from the flexibility that they have. It's generally accepted that the choice of switching a group of warehouse personnel from loading to unloading operations, etc., is highly desirable.

Secondly, consider the important factor of maintenance and repairs. In discussing this with several manufacturer's representatives the point has invariably been made that they themselves find it very difficult to acquire truly capable mechanics for their equipment. They indicate that they spend years training their field service men, yet many plants refute this experience by providing the average already overworked maintenance staff with a variety of types of trucks and try to feel justified in criticizing the mechanics when these trucks are not always up to par in operating efficiency. It's quite true that in principle they all have some comparison but actually the motors, bearings, contacts, relays and service points are all different and the time that would be required to properly train a crew in the maintenance and servicing of each type, represents considerable investment and hazard to the equipment.

Repairs involve spare parts. It naturally follows that a manufacturer's recommended list for stock of normal operating replacement parts such as contacts, bearings, mast rollers, springs, brake linings, tires, etc., would have to be duplicated for each different type of unit in use. This, along with the somewhat intangible expense of ordering, storing, cataloging and inventorying can easily amount to several thousands of dollars annually. The possibility of interchange of parts on standard units allows for the operation of many units with only one doner for repairs while the worn or broken parts are being ordered and installed.

Some of those contacted have testified to the fact that on many occasions three or four of their badly needed units were laid up for various reasons, effectively crippling their materials handling operations, while the several manufacturers were being pressured for expedite service. The hidden costs of such incidents can only be guessed at but you can be sure that they represent many times the price of the part or parts that are missing.

Thirdly, and of considerable importance too, is the actual lay-out of the warehouses. It's an accepted fact that efficient warehousing operations requires the use of the greatest percentage of the available cubic storage area. Most organizations find it to be practical to lay out their warehouses in aisles or lanes, to identify these areas with painted lines and to assign location identification numbers in order to "spot" the materials that are stored there. Standardizing on the equipment that is used provides for the most practical aisle widths. Turning radius will be uniform, ceiling heights, doorways and head clearances will all be the same and it naturally follows that this uniformity will influence the whole efficiency.

Having covered what seems to be the major points in favor of standardization, let us consider those that would seem to justify *not* standardizing. Chief among those points would be the limitations that might arise, thereby denying the exploitation or the adoption of any of the new developments that will certainly come along in this rapidly expanding field.

It's a fact that each manufacturer seeks to make his units distinctive, embracing new features and accessories that will suit the individual company's materials handling problems. These services are being expanded at this time by all of the manufacturers, though they were curtailed or stopped completely during the war years. Another observation that may be made in favor of diversity of materials handling equipment is the doubt that is natural in the mind of any person responsible for its use, as to whether or not his first purchased choice was the best, most efficient and most practical unit for the job. Some individuals answer this question to their own satisfaction by keeping service records for each unit for comparison. Perhaps an exchange of this data between the individuals of several companies will substantiate or deny those records.

General Application

While this discussion has dealt primarily with mobile warehouse units, it would seem to follow that the same observations apply to all materials handling equipment. Scales, bins, lorrys, hoppers, conveyors, pallets, skids, vibrators, hand trucks and the like. At some time in the life of such equipment adjustments and repairs are necessary and a careful consideration of the benefits of standardization in the purchase of such equipment would certainly be in order.

Abstract of address at Conference on Materials Handling held concurrently with National Materials Handling Exposition, Cleveland, Ohio.

Safety Factors Involved In Materials Handling

By C. S. LINK, JR., Avondale Mills, Sylacauga, Ala.

— Before Textile Section, National Safety Congress —

THIS entire paper is based on the experience gained in connection with the safety programs and materials handling projects as is being carried on in Avondale Mills' 11 plants in Alabama. In Avondale Mills, the matter of safety is on an equal footing with such items as production, quality and deliveries, and, most fortunately, is the fact that this interest in safety is spearheaded by top management.

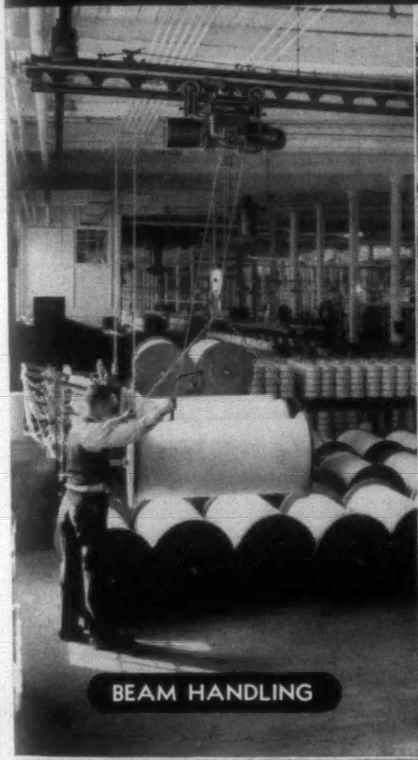
It was top management's idea to set up the plan by which a group of people in each department and each plant were asked to serve for a month on a committee whose interests would lie in one of four directions—one group on safety, another group on good housekeeping; another on thrift and still another on oiling. These groups are selected in alphabetical order from the payrolls and at the start of the program, half of them served for two months, the other for one month; thus we now have the half of the group with experience in the subject, breaking in the new half. Over a period of time, therefore, all employees will have served, at some time or other, one or all of these groups.

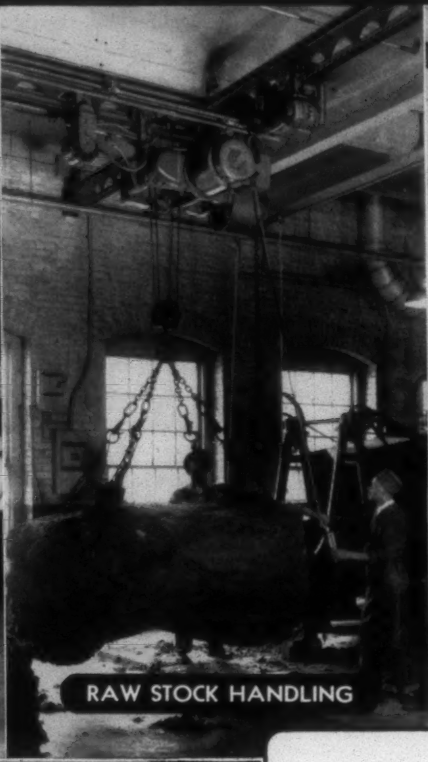
These groups hold monthly inspections of the entire plant, then sit down and talk over their findings; a written report is made to the general office. All suggestions are acted on or rejected if not feasible, and prizes are given for worthwhile suggestions.

When a lost-time accident occurs, the full details are reported to all superintendents as well as the main office; statements are taken from the injured as to how it occurred and the best possible safeguard suggested as to how to prevent a re-occurrence. Each such accident and report is then taken up at the monthly meeting of the safety group and thoroughly discussed, and notes made of their suggestions and criticisms.

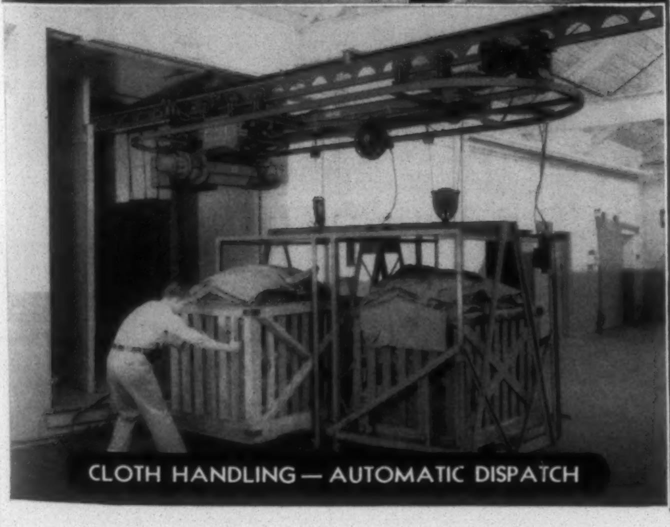
When a minor accident occurs that does not involve lost time, but which does involve medical attention or first aid, the name of the injured, his explanation, the nature of the accident and the causes are carefully recorded and a monthly report filed with the main office. Here they are consolidated, and a frequency rate established and results are reported to the committee and occasionally published in our house organ, the *Avondale Sun*. We own and operate

TEXTILE MILLS BOOST EFFICIENCY *with* CLEVELAND TRAMRAIL


BEAM HANDLING


RAW STOCK HANDLING

PACKAGE DYEING


CLOTH HANDLING — AUTOMATIC DISPATCH

Efficiency — meaning costs and output of product — has been greatly improved in many textile mills with installation of Cleveland Tramrail, even with other production facilities remaining the same.

During the period following the war it is predicted that the use of Cleveland Tramrail will be accelerated tremendously because textile mills will require more efficiency in operation than ever before if they wish to remain in a favorable competitive position.

No other machinery offers as great returns for the small investment required as overhead materials handling equipment.

Upper Left: FIELDCREST MILLS, SPRAY, N. C.
Upper Middle: CONE MILLS CORP., GREENSBORO, N. C.
Upper Right: STEAD & MILLER CO., CONCORD, N. C.
Lower Left: GREGG DYEING CO., GRANITEVILLE, S. C.

MATERIALS HANDLING
TRAINED SPECIALISTS

CLEVELAND TRAMRAIL CAROLINAS CO.
DIV. OF

S. R. BROOKSHIRE
V. G. BROOKSHIRE

ENGINEERING SALES CO.

BUILDERS BUILDING
CHARLOTTE, N. C.

our own hospital in Sylacauga, and thus the statistics presented will be a result of actual hospital cases as well as results obtained from the monthly reports.

Materials handling equipment must fulfill certain basic requirements: safety to operators and to other employees; prevent fatigue; increase productivity per employee; promote good housekeeping and make a reasonable return on the investment. All of these are basic and fundamental.

In two plants we have installed low-level dump chutes for doffers, so that when a frame is doffed there is no need to lift 150 pounds four feet to dump the yarn into a larger box. The yarn is dumped into the proper chute which leads to a large hopper which holds from 1,500 to 1,700 bobbins—six or seven doffs. In one of these plants, before this installation, we had a hospital record of four to five cases a day of lost time due to strained back. Since this installation has been in use there hasn't been a single case.

In another plant a system was installed to return empty bobbins to a conveniently located station, near the center of the spinning room, as fast as they were emptied at the winders. This eliminated a large part of running with doff boxes, kept large supply boxes off the floor, utilized space under the mill and along the ceiling with savings on all these points.

In the weaving mill the cloth doffers took their rolls of cloth great distances, hoisting the heavy rolls on their shoulders, placing them on a large truck which when filled, was pushed to the cloth room, a distance of 350 feet. There was the ever-present danger of pushing this piled-high truck into warps, or into operators, or from being suddenly stopped by a quill on the floor causing injury to employee himself. This has been eliminated by installing a belt carrier overhead down a large alley, together with three air hoists which raise the cloth rolls up to the carrier. On the second floor, drop chutes through the floor permit the cloth doffer to drop the rolls onto the belt. The belt carries this cloth directly into the finishing department.

That fatigue is an important source of accident is a recognized fact. Some mills employ elderly men on jobs that do not require skill, but rather manual labor and a minimum of physical strength. These men tire more quickly than younger men, and are thus a potential source of accidents.

In one plant, the filling yarns last only 20 seconds in the shuttle. The use of a quill stripper was impractical, and all stripping was done by hand. Four to six elderly men were used on stripping these quills by hand each shift. The work required that they bend down into a large box to grasp loose ends of yarn on the quills and pull it off. At times as many as 200 bobbins would be involved—a big load for a man, and the constant bending, pulling and twisting was very fatiguing with the result that there was frequent absenteeism. The reason usually given was "I'm just wore out." A line of conveyor belts was installed under the floor and under each line of looms. Holes were cut in the quill cans and through the floor, so that when the loom ejected a bobbin, it fell directly onto this belt which carried it to a cross belt, which in turn deposited the quill at a work table. Here one man, sorted the quills that could be put back into the looms from those that could not, dropped the quills into the hopper at his side from which a belt with cleats carried the empty quills back up stairs to a central point in the spinning room.

In the yarn mill, two elderly men per shift were used to roll big supply boxes of yarn to the winders and there, by hand, place the bobbins, a few at a time, into the supply shelf at the top of the winder. Here again fatigue was proving a safety hazard. This problem was solved by providing an electric hoist that raised the doff box into the conditioning unit, the yarn then traveled up a belt equipped with cleats, to a cross belt over the end of the winders, through automatic closing or opening gates. At the proper winder, the yarn would be deposited into a large hopper, sufficient to hold a 16-hour supply. From the hopper a belt replaced the yarn storage shelves along the top of the winder. When yarn was needed, the operator pushed a button and this belt brought the yarn out of the hopper into position for the winder hand.

It will be noted that these installations cut out four to six men per shift in quill handling and one man per shift in laying up yarn on winders. This represents a reduction of men required and an increase in productivity per man. There is also another saving in the weave room organization. The cloth does not have to wait to be taken to the cloth room but is sent there the moment it is doffed from the loom. In the yarn plant the doffers have to walk to their supply of bobbins at a maximum of only one-half the distance formerly walked. Thus again a gain in productivity per employee. Other gains are still possible.

In every installation which had been made so far and the many that are still being planned, we have utilized space not heretofore considered as costing money, but which in reality does. We have used space in the basements, under the floor, along the walls, near the ceiling and above the lines of traffic. We have eliminated numerous boxes used for temporary storage, and we have minimized the pushing of boxes in work spaces.

In one plant there is being installed a system of handling and storing picker laps, directly from the pickers and automatically placed at the back of the cards with provision for handling and selection of four different laps, if necessary. This will eliminate such things as loose cotton, broken laps, damaged machinery, loading and unloading a lap truck, pushing it to a card, unloading and placing in the supply rack, and damage to the lap when dumped on its end after doffing. With this system, the laps will travel, out of the line of traffic, at the back of the cards.

The cost of these various installations are carefully computed, contracts for installation, or our own costs carefully scrutinized before installation is made. Elimination of help and increased production is taken into consideration. The installation of materials handling equipment in itself does not necessarily mean the reduction in a labor force—sometimes it may even increase it. So all factors should be carefully analyzed, perhaps models actually constructed, or limited installations made before a complete analysis of the return on investment can be made.

Only a few of the installations we have made at Avondale plants were considered here. Our program includes such projects as handling cotton from cars and trucks into the proper warehouses; handling cloth from warehouses into cars or trucks; handling waste from bins into presses and to storage; supplies and several other materials handling projects. Avondale invites any who are interested to visit the installations and see for themselves.

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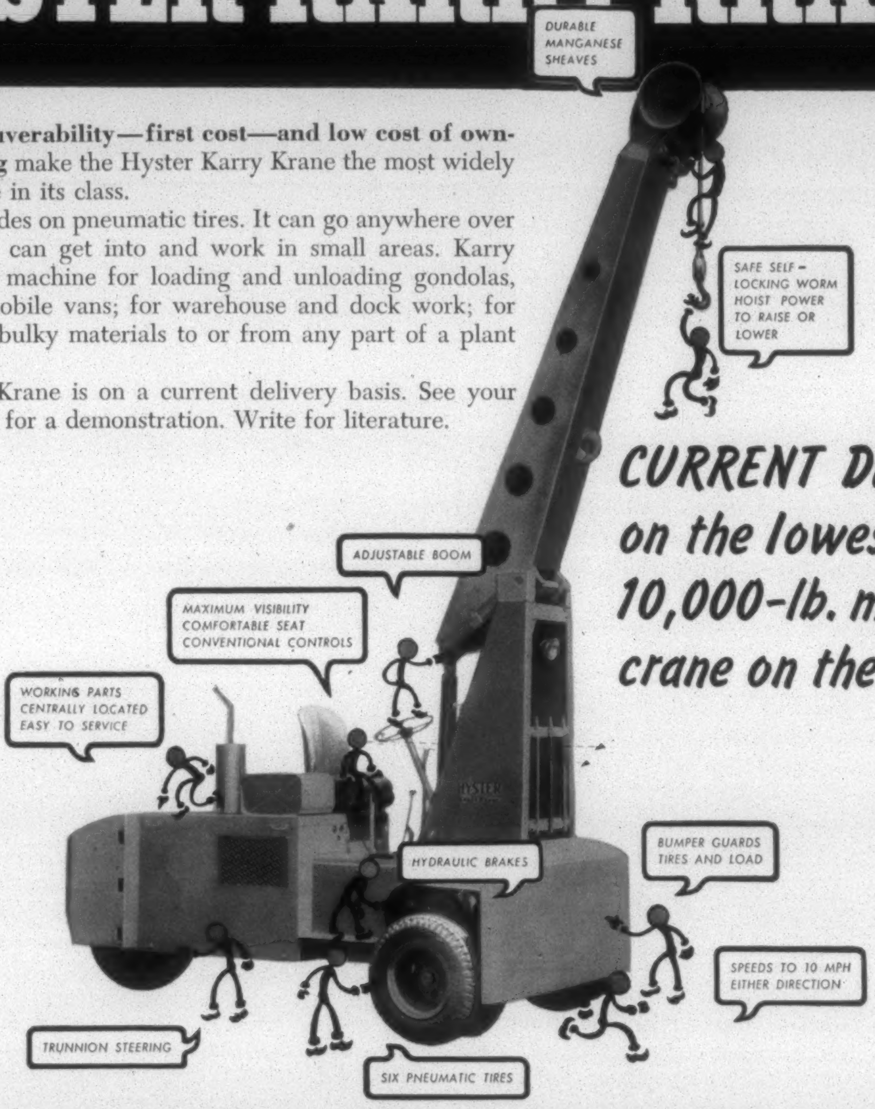
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Direct And Vat Dyeing Of Rayon

By JOHN BOULTON, M. Sc., F. R. I., F. T. I.

THE aim of this talk is to give a brief account of current yarn dyeing practice, emphasizing any aspects which are novel or have depended on recent investigation.

Direct Dyes

General practice in rayon dyeing is pervaded by the results of the last 20 years researches. The following principles are fundamental to modern practice. Control should depend upon the characteristics of the individual dyes, viz: (a) leveling capacity as determined by diffusion rate; and (b) exhaustion rate of dyebath as determined by the influence of sale additions. These factors are of vital importance in mixed dyebaths; dyes which are as nearly compatible as possible with respect to (a) and (b) should be used. Use the highest practicable dyeing temperatures. Dye at the boil wherever possible. In circulating machines ensure maximum speed of flow and uniformity of packing. Where, as normally liquor volumes are low, use concentrated dye brands and clean water.

Control—Dyes should be classified according to: (A) Dyes which are "self-leveling," i. e., dyes of good migration or leveling properties. (B) Dyes which are not self-leveling but the exhaustion of which to give uniform dyeing can be controlled by regulated additions of salt (i. e., "salt controllable" dyes). (C) Dyes which are not self-leveling and are highly sensitive to salt. Exhaustion cannot be adequately controlled by salt additions and they require to be dyed, initially at lower temperature. Uniform dyeing is initiated by temperature control and full exhaustion obtained ultimately at the boil by salt control. These are the "temperature controllable" dyes.

Temperature—The established physical fact that rise in temperature creates increased rate of diffusion of dyestuff molecules in cellulose fiber leads logically to dyeing at the boil. It is worthwhile to comment briefly on the effect of temperature on both rate of, and equilibrium attained in, dyeing. Rise in temperature leads to increased rate of absorption of dye (by diffusion inward of dye molecules) and *decrease* in *amount* of dye taken up at equilibrium). In terms of diffusion rate of dye molecules in cellulose, it is found that there is an increase of about 20 times for a temperature rise from 50° to 90° C. for a typical slow dyeing dye. Because of this it pays always to dye at the highest possible temperature and this should only be below boiling when temperature control is essential as with the highly salt sensitive non-leveling type of Class C dye.

Liquor Flow—It has been shown that any direct dye, no matter how unlevel its normal dyeing behavior, can be dyed uniformly on closely packed viscose rayon given that the speed of passage of dye molecules through the mass is sufficiently high. In laboratory machines it has been found possible to dye any direct dye on dense packages by speeding up liquor flow. When the rates of flow used are considered, it is seen that they are not high; of the order of 1.2 gallon per minute per pound of yarn. Such flow rates are well within the scope of Franklin, Longclose, Obermaier or Courtaulds types of machine. Yet the results of the controlled laboratory experiments cannot be fully emulated in practice. The reason is that, in practice flow is not uniform. The methods of packing viscose rayon cakes, for example, are such that leaks in the flow system are bound to occur and the rate of flow observed is, in part, invariably the rate of flow of liquor through adventitious spaces. The mean rate of flow through the cake or other yarn mass is relatively very slow. Another limiting factor is, of course, the hydrodynamic pressure which the walls of a rayon cake or cheese will withstand without deforming.

A step forward has been made by the Courtauld type rayon cake-dyeing machine. No provision is made for higher mean flow rate, but the continuous sleeve of rayon cakes which forms on the dyeing arm is the most nearly leak proof of all cake methods, and, given uniform cakes, gives more nearly perfect results in so far as collapse and consequent channeling of moving dyeliquor do not occur.

Vat Dyes

The principles of direct dyenig still apply in some degree; the leuco-vat has essentially the physico-chemical characteristics of the direct cotton dyes. The leuco-vat dyes have individual and widely different properties of leveling, which takes place by diffusion of the dye-molecules as in the case of direct dyeing. The influences of temperature, electrolyte content of the dyebath (necessarily very high using the orthodox leuco bath set with caustic soda and sodium hydrosulphite) are qualitatively the same. There is the added complication that actual dyeing take place with the dye in an unstabled reduced state.

A fundamental problem with vat dyes, especially the anthraquinoids, is the disparity in rate of absorption by viscose rayon and rate of penetration. They have a higher affinity for regenerated cellulose rayons than for natural fibers. They behave like super-salt-sensitive members of Class C direct dyes; quick to exhaust on the most readily available fiber surfaces and slow to redistribute by penetration of individual fibers and migration from fiber to fiber.

In yarn dyeing, as in piece dyeing with the continuous padding and steaming methods in the United States, this fundamental problem has been tackled by attempts to dye in two stages: (a) distribution of dye in a non-absorbable state: i. e., unreduced dye in aqueous suspension distributed

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over the yarn surfaces; (b) application of the reducing agent which permits the inward diffusion of the soluble dye particles distributed by padding.

This method, in a number of variants, has had some success, but it is still necessary to dye the bulk of vat dyed rayon by traditional methods, which will be detailed.

With the dispersing agents so far known, it is not possible to produce a suspension of oxidized vat dye which can be distributed uniformly throughout thick pasages in the case of all vat dyes. And the quantity of dispersing agent required to give optimum particle mobility is specific to each dye, so that the dyeing of mixtures is possible only to a limited degree. The difficulties of uniform penetration, as with direct dyes, are greatest for fine deniers. Thus traditional leuco-vat technique on skeins, is still used for most yarns finer than 150 denier, 27 filaments, although as will be seen, progress in the direction of some universal application of vats to cakes has been made.

Leuco Vat Dyeing

In accordance with what has been said about the leveling influence of temperature, cold dyeing of vats is now discarded on rayon. The methods for anthraquinonoid vat dyes are as follows:

Group 1, Strong Alkali Type Dyes—Dyed from 1.25 gallons of 72° Tw NaOH per 100 gallons; 35° C. rising to 60° C.

Group 2, Weak Alkali Type Dyes—(a) 0.25 to 0.50 gallons of 72° Tw NaOH per 100 gallons; 35 rising to 60° C.; (b) one gallon 72° Tw NaOH per 100 gallons at 80° C.

These methods are to be compared with cotton practice, which recognizes three groups of dyes, strong alkali dyed at 50° C., and weak alkali dyed at (a) cold, (b) 50° C.

The application of leuco vats to viscose rayon calls for modification in the dyebaths, viz, restraining agents. The "strike" of strong alkali dyes is so rapid and as heavy that, in the dyeing of rayon packages some form of restrainer must be used or the initial unlevelness caused by surface absorption of dye taking place at a rate faster than dye circulation, will never be overcome. The best of all restraining agents is cellulose sulphite waste liquor; but to be effective this agent must be used in the presence of magnesium hydroxide. The reason why some sulphite waste liquors work and others do not is that some contain magnesium. In the cooking of wood pulp to remove lignine, calcium bisulphite is usually used; occasionally magnesium bisulphite. It was sometime before we discovered that only those containing magnesium were effective restrainers. Now, any waste liquor from wood pulp cooking is used with a quantity of magnesium sulphate added to make sure. This, in the alkaline condition of the dyebath produces magnesium hydroxide, which is maintained in the colloidal state by the protective colloid, lignin sulphonic acid. Dye ions replaces some of the hydroxyl ions in the lignin—magnesium hydroxide complex and are held by this complex so that a dynamic equilibrium exists:

Dye-Cellulose Complex	Dye in True Solution	Dye-Lignin Mg. Complex
LH		RH

Dye ions are freed progressively by the RH complex to take part in the dyeing. This theory has been amply proved and the regular composition of strong dyebath is:

2.5%	Caledon Blue RC paste
1.0%	Caledon Jade Green XS paste
8.0%	Sodium Hydrosulphite
6.0%	Sulphite Cellulose Waste Liquor
2.0%	Epsom Salt (Mg SO4)

All on weight of yarn, plus 1.25 parts per 100 of 72° Tw NaOH. Dyeing would be started at 38° C. and finished at 60° C.

Another effect of the sulphite waste liquor is to protect the yarn from degradation during dyeing. It replaces tannic acid in this respect.

A restrainer is not used with most weak alkali dyes, for which typical recipes would contain 0.20 to 0.40 parts of tannic acid per 1,000 of dye liquor as protection against degradation during dyeing. This degradation, which is unundoubtedly associated both with the action of hot strong alkali solution and the oxidation-reduction process involving the dye, is very temperature sensitive and, protective agents notwithstanding, 80° C. is the absolute upper limit for vat dyeing. Five degrees above this would, in a two-hour dyeing on the Gerber machine, produce a yarn too tendered for use.

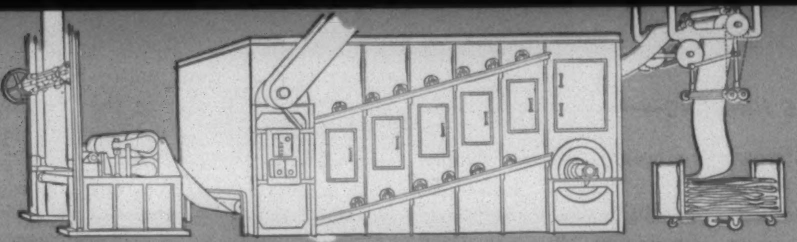
Pigment Pad Methods

The Abbot-Cox process was developed to make use of the product Dispersol VL, condensate for fatty alcohol with ethylene oxide. The following are the essential stages: (a) the necessary Caledon dyestuff, in paste fine form, is made up as a fine dispersion, using a suitable dispersing agent (preferably Dispersol VL) and this liquor is then circulated through the package or pack in the machine; (b) the dyestuff in the liquor is then substantially exhausted on to the goods by the gradual addition of an electrolyte such as common salt or Glauber's salt; (c) the dyestuff so applied is then reduced in situ by the addition of the normal reducing agents; and finally (d) dyeing is completed by developing and soaping in the customary manner.

It will be seen that the Abbot-Cox process differs from previous processes in that the vat dyestuffs, applied as fine pigment dispersions, are deliberately exhausted on to the goods prior to reduction.

Dyeing Vat Fawn on Courtauld Machine

The cakes must be carefully dressed on to the tubes, all tight and very slack cakes being rejected. Tension applied with the screws should be as light as possible. The cakes are swelled by immersion without circulation for one hour in boiling water containing four ounces per 100 gallons Calgon T. The unit is lifted two inches to lower pressure, the pump is then started, the unit lowered gently, and after ten minutes the tension is checked over again. The temperature is raised, if necessary, to 190° F. and the color, which has been previously homogenized with the Dispersol VL, is then added to the dyebath. After 30 minutes the temperature is reduced to 175° F. and the caustic, to which has been added a solution of tannic acid, is run in over a period of 20 minutes. Half the hydrosulphite is then added and dyeing carried out for one hour, the temperature being maintained at 175° F. and the hydres added as required. The cakes are then raised from the dyebath and examined



In the first section of the Butterworth Continuous Dyeing Range, goods enter a 2-roll padder in which the color is applied in pigment form, followed by drying on a special type air dryer.

Cut Dyeing Costs on Vats and Sulphurs

Get ready to sharpen your pencil and refigure your dyeing costs on vats and sulphurs. Here are facts about the Butterworth Continuous Dyeing Range based on actual mill installations.

Butterworth Pad Steam Range Vs. Jig Dyeing

1/3 Floor Space

Complete pad steam range requires space only 110 x 10 feet to run 6,000 yards per hour. To produce same yardage by jig method requires 3,250 sq. ft. of floor space for vat colors, 2,800 sq. ft. for sulphurs.

2/5 Labor Cost

Pad steam range requires crew of four men plus part-time color weigher and mixer—36 man hours on 8-hour shift. To produce same yardage on vat colors by jig method requires 100 man hours on 8-hour shift . . . 88 man hours on sulphurs.

Savings on Chemicals, Dyestuffs

Chemical costs are cut an average of 40% with the pad steam range. Color costs are equal, or up to 25% less on certain classes of goods. In addition you save the cost of jig leaders . . . get better output because there are no jig ends to trim back.

It takes only two pads, a hot flue dryer, a steamer and a compartment washer to give you a complete 2-stage range for both vat and sulphur colors. Compare this with 24 jigs required to produce an equivalent yardage on jig work . . . plus roll benches for storage and in the case of vat colors a pigment padder. For a comparison of pad steam vs. jig work, see figures at left.

If you are doing *conventional* continuous reduced or pigment work, consider these facts. The Butterworth pad steam range will cut your costs from 10% to 35% on both vat and sulphur colors. On vat colors you will get deep shades which formerly required the use of jigs. On sulphurs, pad steam dyeing gives full jig money value and fastness, and shading is controlled throughout the run.

For complete facts on Butterworth Continuous Dyeing Systems, write us today.

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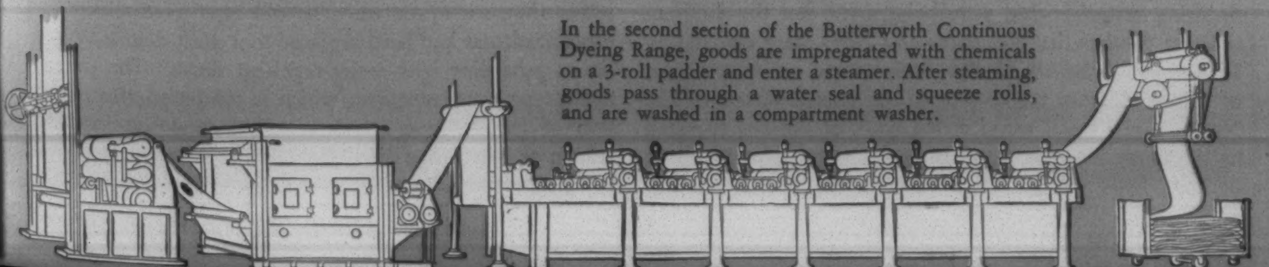


In the second section of the Butterworth Continuous Dyeing Range, goods are impregnated with chemicals on a 3-roll padder and enter a steamer. After steaming, goods pass through a water seal and squeeze rolls, and are washed in a compartment washer.

for levelness. If satisfactory, the bulk is returned to the dyebath for five minutes and then "flooded" with cold water to remove all scum. This is followed by a cold wash, and oxidation with sodium bicarbonate plus a sodium perborate for 20 minutes at 140° F. A further wash plus a boiling soap for 20 minutes complete the processing.

The Use of Solvents in Vat Dyeing

It has been found that certain vat dyes are more easily leveled on viscose rayon, if dyed from a solvent solution. The solvent does not appear to exert any restraining action on the rate of dyeing of the leuco vat, and as with dyeing from an alkaline solution of the leuco compound in water—the rate of dyeing increases with rise in temperature.

The higher boiling solvents Carbitol and Butyl Carbitol are preferable to the lower boiling Meths. Spirits, since there is less loss of solvents due to evaporation during the dyeing process, also the higher boiling solvents allow for higher dyeing temperatures (e. g., 80° C.) to be used with these dyestuffs that are not unstable at such temperatures.

Sulphur Dyes

A fairly wide range of sulphur dyes are in use on viscose rayon staple, both as loose staple and in the hank. In the latter case the Gerber or the Hussong-type machines are used. Loose staple is dyed in the Obermaier-type circulating machine. When this is done it is important that the rock sulphide usually employed be substituted by sodium sulphide crystals; the solid impurities in crude sodium sulphide filter out on to the dyeing mass to create uneven dye distribution and prevent free liquor flow.

As with other classes of dye, sulphur dyes need to be applied according to their individual dyeing behavior. It is useful to consider them as falling into three classes, viz:

1. *Good leveling.* Can be dyed throughout at 95° C. Examples—Sulphol Brilliant Green 8G, Thional Sky Blue FFS.

2. *Less good leveling.* May be dyed at 95° C. Salt addition should be made gradually to control exhaustion. Examples—Thional Brown OW, Sulphol Dark Brown B.200, Thional Olive R.200, Sulphol Claret RL.300.

3. *Poor leveling.* Control exhaustion by commencing dyeing at 40° C. and gradually raising to 95° C. at which temperature the bath may be exhausted by gradual additions of salt. Examples—Sulphol Yellow JR300, Thional Brown GDR200.—*(To be concluded.)*

The author, whose paper was presented before the March 3 meeting of the American Association of Textile Technologists in New York City, is head of research and chief chemist for Courtaulds, Ltd., at Droylsden, England. His detailed discussion of methods of viscose rayon staple dyeing will be published in the April issue.

Trends In Treating Cottons And Rayons

By FRANCIS TRIPP, B.S., M.S., Ch.E., Head of Chemistry Department, New Bedford (Mass.) Textile Institute

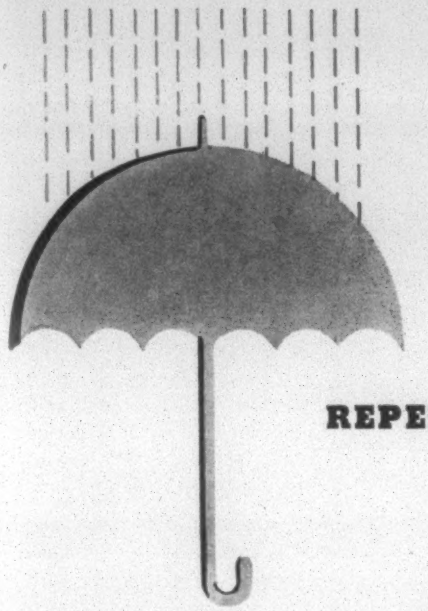
IT is safe to say that nearly every person at one time or another, during the latter days of World War II, heard the remark made that plastics would revolutionize our industrial life—that plastics would make great inroads in replacing steel, wood, copper and other materials. The remark was probably made by a person who thought that plastics was a single new miracle material that could be used in any type of fabrication, little realizing that there are probably 50 different types of plastic materials, each having definite physical and chemical properties and each type useful for manufacturing certain specific articles.

We have observed, since the end of the war, that plastics have not made universal inroads into our older types of manufacturing or building materials, but plastics have found certain places in our fabricating industries where they have proven to be superior to older types of material. However, they are not replacing the older materials in a general way.

During the war, we likewise heard of the many different finishing materials that were being used and the different types of finishes that the Army and Navy were demanding for cotton fabrics. With our Army spread on every corner of the earth from the tropics to the frozen wastes of the North, it is a small wonder that types of finishes required by the Quartermaster Depot were of a variety unheard of in normal times. We heard predictions that after the end of the war that fabrics would be finished as they never had been processed before. We heard that starches and dextrines would be replaced by resins; that nearly all wearing apparel would be required to be water repellent; that pigments would replace vat pastes in fast color dyeing; coated fabrics would have a greater run in the consumer market and fabrics would be required to be fire-proofed before they would be allowed to pass the consumer.

As with plastics, none of the above-mentioned changes have been general. Like plastics, many of the finishes and chemical products that were used to make wartime finishes, have found definite uses where they are proving superior to older types of finishes.

Just before the entry of the U. S. into the war, water-repellents were being used on textile fabrics in greater amounts than ever before. The public had come to demand rainwear that would "breathe." The general public wished to wear raincoats and sportswear that were water-repellent rather than waterproofed. The old type oiled slicker and rubberized coat had been replaced to a great degree by poplin or gabardine with water-repellent finish. The conventional type water-repellent, which is composed of a dispersion of paraffin wax in aluminum acetate solution with gelatin or glue as the dispersing agent, was being employed



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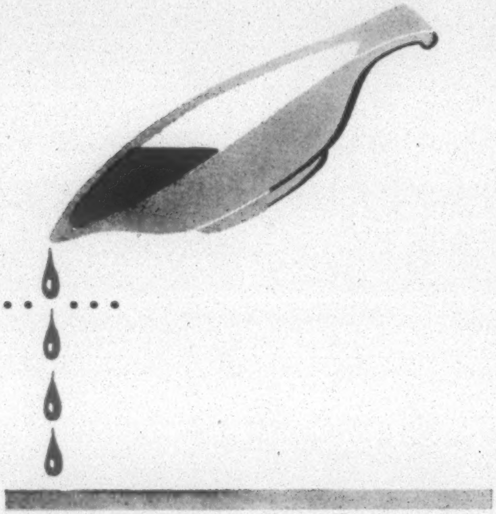

RESISTS STAINS......

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WATER REPELLENT

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American Cyanamid Company

Industrial Chemicals Division

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by some plants for water-repellent finishes. The writer remembers some of these in particular that were being advertised, such as Neva-wet, Ramasit K, Aridex and Cravenette. This type of finish would produce excellent water-repellency but the finish would wash out during laundering or dry cleaning. Du Pont then came out with Zelan, which is classed as a washable and dry cleansable water-repellent finish. Mt. Hope Finishing Co. at this time was producing a dry cleansable and washable water-repellent marketed Wat-a-tite. With the advent of the war and with the government requiring a good portion of its cotton fabrics finished with a washable repellent, such products as Norane, Doolanize, Zelan were used in great amounts.

The Quartermaster depots demanded the so-called durable water repellents on their poplins, but on cotton ducks they specified the non-washable types made from aluminum acetate and paraffin wax. Likewise, they also insisted that the finished duck contain a heavy percentage of paraffin wax.

Zelan and Norane are being widely advertised to the public today, and much rain wear, sports jackets and ski clothes are being processed with these products. Both products are nearly identical in chemical nature. They both link chemically with the cellulose of the cotton fibers by the aid of high heat or baking to produce a definite chemical end product.

Zelan is known chemically as in the same category as N-Octadecyl Amido Methylene Pyridinium Chloride. On baking, the cellulose of the fabric that has been impregnated with Zelan joins it chemically where the chlorine groups are present. A typical application to cotton is: Dissolve 90 pounds of Zelan and 15 pounds of sodium acetate in water and bring the volume to 100 gallons at 110° F. Put the liquor into a padder with good set on the rubber nip rolls. Impregnate the fabric to be water repelled by allowing it to pass through the mangle, so that it retains six per cent Zelan on the weight of fabric. Pass the fabric into an air dryer and dry it at a low temperature, followed by curing in a gas-fired curing chamber at 350 to 400° F. for 45 seconds. Wash the fabric through an open-width soaper at 140° F. with soda ash and synthetic detergent, followed by a hot water wash. Dry on tenter frame.

We can safely say that water-repellents, because they were used in great quantities by the Army during the war, have become more popular with the public than ever before. Many dry cleaning establishments now render a service of cleaning fabrics which have been made water-repellent with non-durable types and refinishing the fabric with a water-repellent. Drax, made by S. C. Johnson & Son, is advertised as rendering fabrics water-repellent through the facilities of the dry cleaning establishments.

Jackets and other types of wearing apparel, that have been treated with a water-repellent, have the ability to stay cleaner for longer periods of time than fabrics that have received no water-repellent treatment. The water-repellent forms a protective film which prevents the dust and dirt from easily penetrating the celluolse fibers and hence the dirt does not cling to the garment. Curtains in the home can be shaken free of dust if they contain a water-repellent finish. They will also stay crisper in damp weather. Slipcovers made from material that has a water-repellent finish also stay cleaner longer and do not stain as easily as when they had no finish. Water-repellents will be improved upon and will be more widely used in the years to come.

Cellulose Finishes

During the war, the troops in the South Pacific and other bug and mosquito-infested areas, were supplied with a type of mesh marquisette fabric known as "Mosquito Bars." This was a light mesh fabric that the soldiers could drape over themselves and also their tents to keep the insects out.

The requirement of finish called for was generally quite firm and O. D. shade. To get the proper crispness or firmness, mosquito bars (3 by 1 marquisette fabric) was treated with a cellulosic finish that was washable and permanent. Two types were common and enjoyed large business, namely Ceglin, a cellulose ether made by Sylvania at Fredericksburg, Va., and Kopan, an alkaline cellulose zincate solution made by Hart Products Co. The Ceglin had to be dissolved in a six per cent caustic soda solution. The cotton fabric or marquisette to be treated was passed through a solution of Ceglin or Kopan in caustic soda (usually the per cent of Ceglin was ten) and squeezed through nip rolls, passed into a bath of sulfuric acid, which neutralized the alkaline Ceglin or Kopan and the cellulose would be deposited within and on the threads of the marquisette. The fabric then continued on through a series of hot water washes to remove excess acid. By this method a permanent crisp finish was imparted to the mesh fabric.

With the war's end, the use of Kopan and Ceglin on marquisette seemed to disappear. However, there seems to be many places where a cellulose finish that is washable and holds its firmness through repeated launderings can be used. Lace curtains, cotton marquisette curtains, collar interlining fabric and linen finishes on cotton are some of the finishes that can be obtained with this cellulosic material.

Rayon Finishes

As mentioned in previous articles, many of the rayon finishes are of resin nature. The melamines, urea formaldehyde types for shrinkage control and the alkyd, acrylate, polyvinyl acetate dispersions polystyrene dispersions are all used to obtain "hand" on rayon fabrics whether it be firm or drapy. The range of resin dispersions has now grown to where one can obtain a resin to give any type of "hand" to a fabric.

Glyoxal, as well as formaldehyde, under certain conditions of pH and heat will render a rayon fabric shrinkproof. This type of stabilized finish is put out by Cluett, Peabody and sold under the Sanforset label. Some of the older type finishes on rayon still will remain, such as delustering agents, sulfonated peanut, sulfonated castor and olive oil softeners. These oils produce a smooth drapy feel to certain types of rayon taffeta and the writer feels that these sulfonated products will continue to be used as finishes on rayon.

Heberlein Finish

Nearly everyone knows that if cotton fabric is immersed in strong sulfuric acid for a few seconds that it will be dissolved. However, this chemical action can be modified by controlling the temperature and concentration of the

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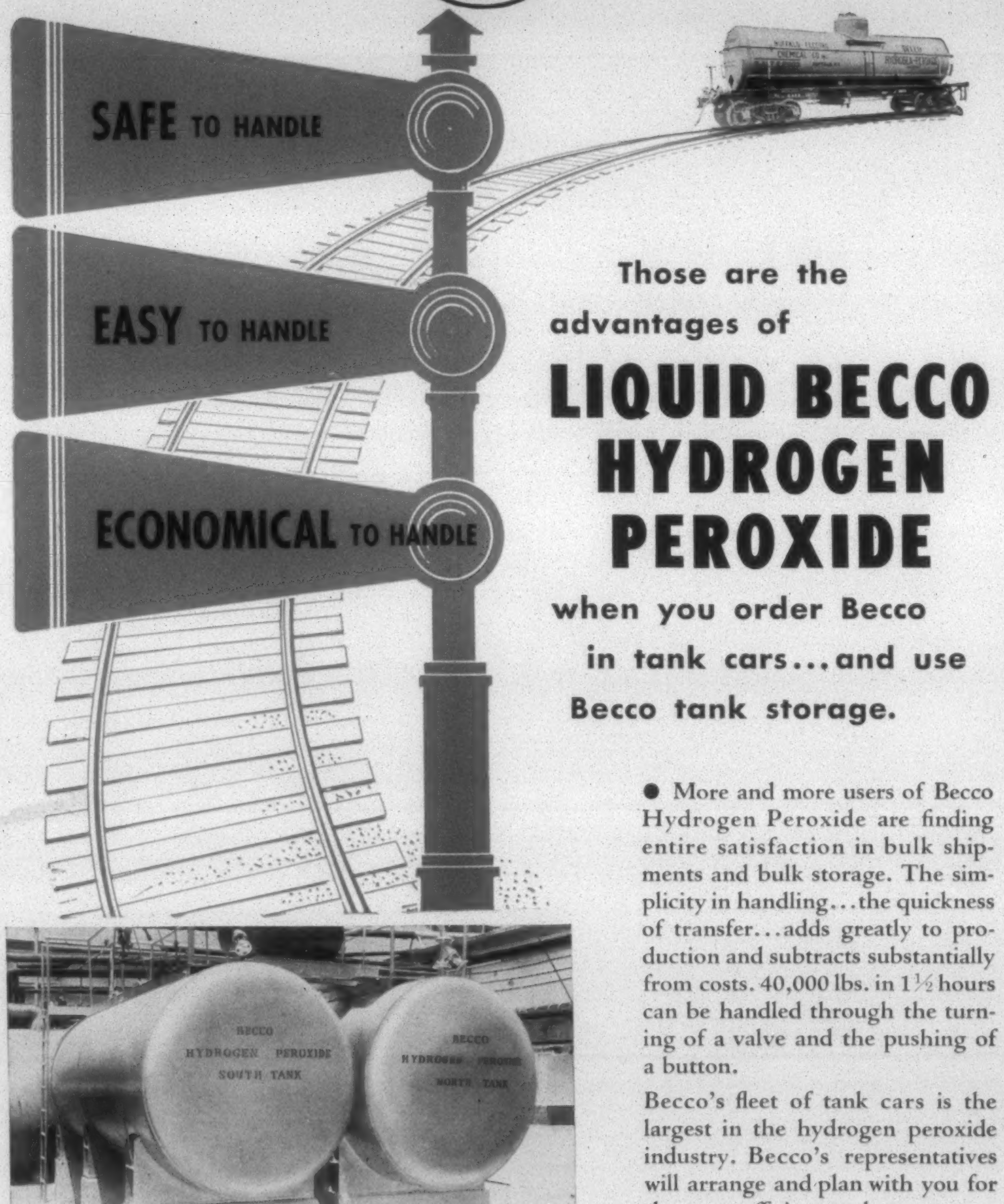

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New York Boston Philadelphia Chicago Charlotte acid and the immersion time of the cloth. The Heberlein finish that produces crisp, sheer cotton organdy curtain material is founded on controlling the action of sulfuric acid on the organdy yarns by regulating the time and temperature of reaction. The sulfuric acid is given time to act only on the surface of the yarns and is quickly neutralized whereby a jelling of cellulose on the surface of the yarns takes place to produce a crisp sheer fabric.

This type of finish is produced by Bellman Brook Bleachery under the name "Bellmanized" finish. Several other finishing plants also run this same process to produce washable crisp organdies. This type of finish requires special handling and lots of experience to eliminate damages and is looked upon as a "special" finish. It will continue to be produced, as it is greatly desired in permanent finish organdy curtains.

Fire Repellents

The treatment of textile fabrics to render them fire-repellent was more or less of a specialty prior to the outbreak of World War II. With the entry of the U. S. into the war, the use of incendiary bombs, such as the Germans dropped on London, brought a sudden realization to our procurement divisions that tarpaulins and duck used to cover equipment, clothing worn by war workers, as well as quilts and comforters for the armed forces, tent duck, camouflage nettings and a host of other materials should be rendered non-flamable. About this time came the great Coconut Grove Disaster in Boston that claimed 500 lives. Later the circus tent fire in Hartford, Conn., which claimed the lives of many, gave impetus to the demand that certain fabrics be rendered fire-retardant, especially if they were to be used in night clubs, theaters, hotels and other spots where the public congregated. New fire laws and more rigid inspection of fabrics used in public places by the fire marshalls, and the passage of a law in California, which banned the sale of wearing apparel such as brushed pile, lace, nets and flannelette goods, unless they were made fire retardant, has now made the treatment of certain textile fabrics with fire-retarding agents a major project.

The ideal fire-retarding agent, obviously, would be one that could be impregnated into a textile fabric and not alter the feel or "hand" of the fabirc and one that would remain when the material was washed in soap and water. Although many companies are working to obtain this type of washable fire-retarding agent, none has been found as yet. The army goods were mostly treated by the "Hooper Process" or 242 Finish whose formulation includes the use of a combination of chlorinated paraffin wax and antimony trioxide. The "add on" to the fabric of this material is so great that the feel of the treated fabric is appreciably changed. Although the process produces a finish that will withstand washing the application is limited to types of fabric like duck, tarpaulins and nets where the heavy "add on" of material with its firming action on the fabric is not of vital consequence.

Ellicott Laboratory of New Jersey markets a flameproof compound known as Ellicote for use on cotton fabric which will stand up to a moderate wash with soap and water. It produces a slight stiffening and coating of the fabric. Du Pont markets Erifon, which is a chemical product that reacts with the cellulose to produce a flame-resistant fabric that will stand a light wash. Ban-flame, by Bancroft Finishing Co. of Wilmington, Del., is a special process of reacting the cellulosic fabric to the action of certain nitrogen compounds together with phosphates and high temperature to give flame resistance to the fabric that will stand up to a hot water wash, if too much soap is not used in the washing.

The simplest method of rendering fabrics fire-resistant is to immerse them in a concentrated solution of water-soluble salts. These salts consist of borates, phosphates, sulfamates, sulfates and the dry "add on" of these salts to the fabric should be around 15 per cent, based on the weight of the fabric. After immersion in the salt solution, the fabric is squeezed to give the desired amount of solution to the fabric, then it is dried on the tenter frame. Materials used are borax, boric acid, ammonium phosphate, ammonium sulfamates, ammonium sulfate. Fire-retarding of textile fabrics is growing in importance and before long, one of the leading companies will come out with a product that can be applied to textile fabrics with no appreciable change in the feel and which will stand several washes with soap and water without losing its flame-resistant properties.

What's Ahead In Textile Drying

By MYRON T. FLEMING, Engineer, Proctor & Schwartz, Inc., Philadelphia, Pa.

THE theoretical drying curve shows the classical constant rate of evaporation as well as the so-called falling rate period and shows that, at or above certain moisture content, water is evaporated at a constant rate, while below this point water is evaporated at a variable rate depending upon the diffusion characteristics of the material. The evaporation rate for the first portion is the portion of the drying curve most usually dealt with in textile drying. For all practical purposes, in dealing with any textile drying where there is intimate contact between the drying medium and the individual thread or fiber, the variation in drying time with different drying conditions follows the laws governing the variation of evaporation rate during the so-called constant-rate period of free evaporation.

Drying is essentially a problem in heat transfer. When water is evaporated, heat must be supplied at the rate of approximately 1,000 B.T.U. per pound of water evaporated. In addition, heat must be supplied for the heating of material, necessary fresh air, and other losses. Basically this heat can be supplied by conduction (contact), convection (air flow), or radiation (sunlight), separately or in combination. Water vapor exists in the air at a certain vapor pressure; likewise, heat is supplied to cause the material or water in the material to reach the wetbulb temperature or slightly higher, and this water has a certain vapor pressure corresponding to its temperature. The only way water can evaporate from the material is to have the vapor pressure of the water exceed the vapor pressure in the air. Therefore, the vapor pressure difference is actually the drying potential.

Another factor of extreme importance is air velocity. In hot air drying, heat is supplied by air; and it is only common sense to expect a higher velocity of air past a drying surface to give accelerated heat transfer and hence an increased rate of evaporation. Actually, the drying time is a function of velocity but not quite a straight-line function. Of the different methods of air application, cross circulation is feasible when one side has a comparatively small film thickness so that there is less resistance to the heat flow required for evaporation and hence the evaporation is greater than in the case of still air. Direct impingement on one side is still better, and direct impingement on both sides the best condition. Among the variables encountered in textile drying are the material, fiber thickness, thread count, twist, cloth construction, dye, finishes or sizes used, porosity, etc.

Special Drying Applications

Two special methods of drying have received much publicity: drying by infra-red radiation, and drying by the passage of a high-frequency current through the material. Infra-red radiation is a form of wave energy emanating from a heated surface and is at the opposite end of the spectrum to ultra-violet light. Its source can be electricity in which the radiating element is the filament, a refractory arch, or a plain heated surface. The energy radiated and hence the heat available for use in drying is proportioned to the fourth power of the absolute temperatures expressed in degrees Kelvin.

With infra-red rays there is at the most only skin penetration, the basic theory of wave radiation supports this lack of penetration; but this does not, however, immediately disqualify this for all textile problems; and many applications are in actual use today. Costs for infra-red drying show that electricity is approximately ten times as expensive as steam while gas is four times as expensive. Infra-red drying installations that have been most successful are used to obtain a pre-drying in front of existing machines.

"Why, it's a beautiful job, Irwin, beautiful! But what the heck is it?"

High-frequency drying is purely electrical; and, while still in the development stage with severe limitations for practical commercial use, it gives genuine future promise in certain applications where there is compact thickness to the material to be dried. Essentially, high-frequency equipment consists of a drying chamber which must have a definite air circulation and be capable of having the air temperature controlled. Exhaust must be provided as in a conventional dryer to remove the proper amount of moisture-laden air. Added to this are two electrodes of one type or another between which the material to be dried must pass. The passage of high-frequency electric current generates throughout the material a certain temperature which speeds migration of the water from the interior of the material to the surface where it must be removed by the air circulation. One limitation is the positiveness of control at true high frequencies. Another is cost including the replacement of expensive power tubes. Steam and hot air drying will be used for the vast majority of drying applications for many years to come, but the other means are definitely a part of the entire drying picture and will undoubtedly come into more general use.

Practical Dryer Design

Practical considerations in textile dryer design involve the man responsible for final quality, be he chemist, dryer or finisher; the man responsible for producing so many yards or pounds of material per week; and the designer of machinery that must satisfy these first two people and at the same time, deliver a sound, cleanly designed machine.

The first man is most likely concerned with tension. He may also be concerned with the elimination of finish marks; and he may be concerned with color or resin migration. He also has ideas on how he wants his material handled and has a very good idea how he wants his material dried to achieve the results he has in mind. The individual responsible for over-all plant production wants, first, maximum production per unit floor space with maximum efficiency. The designer of machinery must plan for efficient operation from the standpoint of the machine operator. He must design a machine that is simple and easy to operate and as nearly foolproof as possible. He must constantly improve the general cleanliness of his design, and must turn out a machine that will stand 24 hours a day of mill operation for perhaps 20 years. Different requirements are solved by various machines. Suction cylinder dryers were developed for the handling of warp knit fabrics in a relaxed condition; they seem to have some potential for the drying of tubular knit fabrics.

Future Trends

In the future one can expect increased production efficiency from operation of machines at higher speeds, increased range operation, more continuous operation, and closer attention to the operation of machinery at its maximum output. Operation of machines at their maximum output involves drying to only a nominal amount below normal regain instead of drying to a practically bone-dry point. Overdrying may cut capacity by around 20 per cent.

There is coming a more critical attention to quality. In many mills, great attention is being given to intermediate quality control tests; and in many companies organized on a vertical basis, this program is directly under one of the executive offices. Automatic instruments are being used on an increasing scale, and there are various Servo mechanisms that operate in conjunction with these automatic controls independent of the action of any operator. Many of these were developed during the war and will see increasing application by industry during the next decade.

Hydraulics is another tool that will find increasing use wherever instant and positive responses are required at high frequency. All of these intriguing possibilities for improved production and quality, therefore, bring one naturally to the need for the closest co-operation between the mill operating men and the machinery manufacturer if textiles are to realize these benefits in the shortest possible time.

Abstract of address before New York Chapter, American Association of Textile Chemists and Colorists.

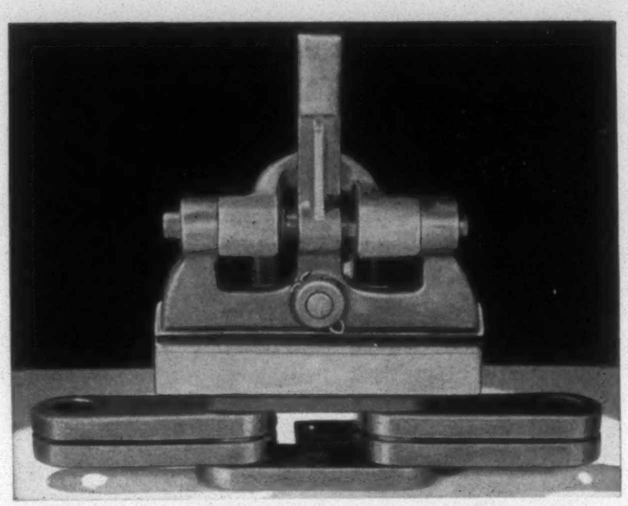
Bancroft Co. Announces New Developments

Three new developments are announced by Joseph Bancroft & Sons Co., Wilmington, Del. The first extends the company's operation into the international field on a worldwide scope, the second sets up an international department in the firm to supervise the first move, and the third development reveals two new fabric finishing processes. It was announced by W. Ralph MacIntyre, company president, that completion of agreements insures the distribution throughout the world of Bancroft textile developments.

Mr. MacIntyre disclosed that the latest growth of international operations by Bancroft followed agreements made with Calico Printers Association, Ltd., of Manchester, England, and with the Raduner Co., A. G., of Horn, Switzerland. Through these agreements with the Bancroft Co., in addition to Everglaze chintzes, other patented Everglaze fabrics will be made available for production overseas and in North and South America. The new department created in the company, for these operations, is called Everglaze International. This department will conduct a comprehensive planned program, both in this country and abroad, on the promotion of Everglaze fabrics and chintzes.

The two new fabric developments revealed by the Bancroft Co. are: Durable lustrous effects for spun rayon and mixtures of rayon and cotton; and durable subdued and deep-seated lustre cottons and rayons. The first group of fabrics, resulting from research in Bancroft laboratories and now ready for full commercial use, feel and look like linen. New uses in the apparel field to include all types of casual wear and suitings for men, women and children are opened by this new textile development. The second group of fabrics, durable subdued and deep-seated lustre cottons and rayons, possess a soft flexible hand with unusual draping qualities. Free from excessive creasing and shrinkage, the fabrics will be available in plain shades and prints, providing new opportunities for dresses for all ages as well as practical applications in the home furnishings field.

Both the rayons and cottons, it is claimed, do not fray out and retain their durable degree of lustre, crease resistance and other qualities through repeated dry cleanings and washings. Through these developments many valuable



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properties may be added at one time to fabrics which they did not possess in the past. These qualities will give the fabrics greater value, as they are all of a durable nature. They not only enhance the fabrics so treated but add to their life and usefulness as well as to their style features. For the first time, fabrics with every degree of durable lustre, and varying from exceptional softness to taffeta-like crispness, together with stabilization, spot, soil and crease resistance qualities, can be produced.

The new effects and the new fabrics which can now be included in the Everglaze family give further evidence of the versatility of Resloom melamine resins in textile finishing, according to Dr. D. H. Powers, director of the textile chemicals department, Monsanto Chemical Co. With Resloom, Bancroft's finishing experts have been able to produce durable glazed effects on spun rayon and mixtures as well as cotton, to achieve subtle deep-seated lustre as well as glossy effects on both cotton and rayon, and to obtain a soft as well as a crisp hand. In addition, the fabrics receive the benefits of stabilization and wrinkle-resistance which Resloom imparts.

Booklet On History Of Dyeing, Finishing

An outline on the history of dyeing and finishing, entitled *Old Dyers, Old Books, and Old Methods,* is the subject of a recent booklet by Sidney M. Edelstein of the Dexter Chemical Corp. The subjects covered in Mr. Edelstein's treatise includes: Relationship of Dyeing and Alchemy; Glauder and His "Wonder Salt"; Robert Hooke and the Royal Society; Dr. Francis Home and the Bleaching Industry; and the contributions of Thomas Cooper, Asa Ellis Junior and Cornelius Maloney.

Mr. Edelstein, who is technical director of the textile chemical division for Dexter, discussed the subject matter in detail at a combined meeting of the Lowell Textile Institute Student Chapter and the Northern New England Section of the A. A. T. C. C. in the institute at Lowell, Mass. Mr. Edelstein had on display a number of old books and manuscripts, parts of which are illustrated in his new booklet. Included in Mr. Edelstein's collection are books on chemistry and alchemy and all of the books on dyeing and related subjects published in this country from 1798 to 1890. There are over 2,000 items in his collection. Business men interested in receiving a copy of *Old Dyers, Old Books, and Old Methods* should write on their company letterhead to the Dexter Chemical Corp., 819 Edgewater Road, Bronx 59, N. Y.

Water Repellent Products To Be Probed

A meeting of an eight-man voluntary industry committee was scheduled to have been held March 16 in New York City to decide when and where they would like the Federal Trade Commission to hold a trade practice conference on chemical water repellent products. At a preliminary F. T. C.-industry session in Washington about five months ago, the commission reported that it had received numerous complaints about water repellent treatments for textiles failing to live up to their advance billings. An F. T. C. spokesman warned that if the trade practice conference procedure failed to largely eradicate these abuses, F. T. C. would be compelled to resort to filing complaints against offending manufacturers producing the chemicals.

The voluntary industry committee is composed of W. P. Fickett, president of Textile Fabrics Association, New York City; Charles W. Dorn of J. C. Penney Co., New York; E. M. Edgerton, National Association of Finishers of Textile Fabrics, New York; Howard J. Fletcher, executive secretary of Silk & Rayon Printers & Dyers Association of America, Inc., New York; Morton Freedland, Cosmopolitan Mfg. Co., Cambridge, Mass.; Frederic Lee Hess, president of Schwarzwalder Co., Philadelphia; Robert C. Hunzinger, vice-president of The Cravenette Co., Hoboken, N. J., and L. S. Little, manager of the textile service section, E. I. du Pont de Nemours & Co., Inc., New York.

Maintenance & Engineering

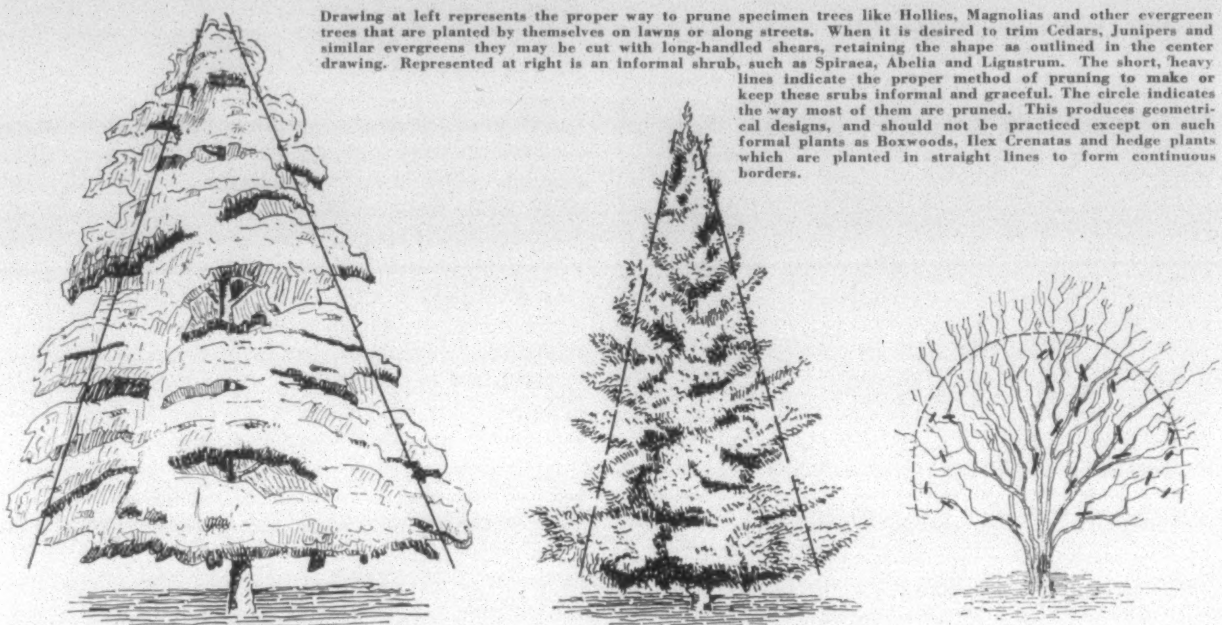
Mill Village Shrubbery Care

By JOHN LEON HOFFMAN

MANY textile villages have large, overgrown shrubs that have been allowed to grow and get out of bounds during the last four or five years because of labor scarcity. Do not let your shrubs grow another season without some attention. Many of them are already too large to prune back and make grow into shapely plants, but those which are not may be pruned during March and April and made to grow into nice plants again.

Such items as Spiraeas, Mock-Orange, Pearl Bush, Weigelia and other early-flowering shrubs, of course, cannot be pruned until sometime in May, otherwise you will lose their blooms. Prune these immediately after they flower.

This article is written to prevent your maintenance force from making all shrubs into formal shapes such as balls, pyramids, or box-like plants which are so common not only in our textile villages, but in the grounds of some of our best homes. No shrubs should be pruned into a ball or a formal shape unless they are such as Boxwoods, Ilex Crenatas, Junipers, cedars, and plants which you use as accents or in hedges planted in straight or curved lines. The others



Drawing at left represents the proper way to prune specimen trees like Hollies, Magnolias and other evergreen trees that are planted by themselves on lawns or along streets. When it is desired to trim Cedars, Junipers and similar evergreens they may be cut with long-handled shears, retaining the shape as outlined in the center drawing. Represented at right is an informal shrub, such as Spiraea, Abelia and Ligustrum. The short, heavy lines indicate the proper method of pruning to make or keep these srubs informal and graceful. The circle indicates the way most of them are pruned. This produces geometrical designs, and should not be practiced except on such formal plants as Boxwoods, Ilex Crenatas and hedge plants which are planted in straight lines to form continuous borders.

should be pruned by cutting each branch a different length as illustrated in the accompanying drawing attached. Large shade trees should be pruned so as to make them grow straight and erect by shortening the side branches near the top more than the lower ones, causing them to form pyramidal shaped heads or tops; never cut out the main stem or leader, for this causes the tree to branch and spread, and produces an unnatural, and in most cases, a grotesque looking object. This does not apply to hollies that have been planted out as individuals in a lawn. They should be trimmed according to the drawing to make them grow into thick, shapely specimens. Junipers and red cedars, when they get too wide or large, may be trimmed as indicated, but since these are formal plants, their shapes should be retained.

Any transplanting of shrubs to new places should be done early in the spring before they start to grow. The pruning should be done immediately after the shrubs are set into their new locations in order that they may grow out and fit into the picture better than if pruned before being moved. Of course, for convenience in handling, part of the tops may be cut back, but they should be pruned again after being set.

Large shrubs that have been cut back heavily will have a tendency to put on long, straight shoots or branches and not produce thick and graceful shrubs. When these long branches come out in the summer, they should be cut back something like half way or more, but care should be exercised to cut them at different lengths so as not to create formal or round top shrubs.

The trouble with most of the pruning is that it is left to some untrained person who is given a pair of long-handled hedge shears and is told to "go at it." Since he has seen others trimmed into these grotesque shapes, he considers this the proper thing to do. The proper pruning of informal shrubs cannot be done with hedge shears; it can only be accomplished with short, hand snips. Of course, large trees need long-handled, heavy-cutting tree shears in order that you may reach up to the branches, in addition to a step ladder and a pruning saw for the large branches.

All trees which are not showing satisfactory growth should be fertilized at this time. This can be accomplished by driving a crow-bar into the ground around the tree, just under the outside edge of the branches, and filling these holes with cow stable manure or some other good fertilizer that contains a high per cent of nitrogen such as cottonseed meal.

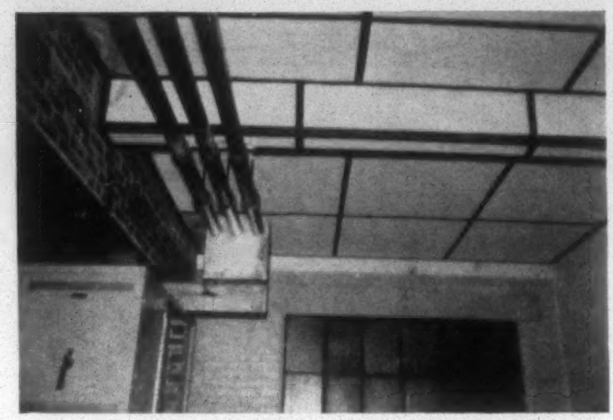
The author of this article is a planning consultant and landscape architect of Forsyth, Ga. His instructions for maintenance of industrial village grounds are written as simply as possible with the hope that anyone can understand and carry them out. Mr. Hoffman will write on other timely matters in the proper seasons. The editors believe that his discussions will assist plant managers in doing some of the things that are needed from time to time, and that this professional advice will encourage beautifying of premises and decrease maintenance costs.

The Electrical Code And Textile Mill Wiring

Part Seven of a Series by JAMES T. MEADOR

AGAIN, as in the February issue of TEXTILE BULLETIN and Part Six of this series, we dig deep into the National Electrical Code. This time, also, in a very important part of the particular phase of electrical work that is of considerable importance to you in the operation of your plants, the extension and remodeling of your present plants, or, in the construction of new ones with special machinery layouts, etc. This session deals with switchboards and panelboards, the code requirements, and some other information relative to Article 384 of the code.

Section 3841, Scope: The requirements of this article shall apply to all switch boards, panelboards, and distribu-



Showing switch room at Aleo Mfg. Co., Rockingham, N. C., with the 3/16-inch thick Johns-Manville millboard on the ceiling and beams which have been installed to conform to electrical code and insurance specifications. Plans also have been made to pour a lightweight concrete of four-foot thickness on top of the present wood floor.

tion boards used for the control of light and power circuits, except in these specific classes: (1) Switchboards in utility owned and operated central stations or sub-stations which directly control electrical energy derived from generators, transformers, etc. (2) Switchboards and panelboards used exclusively to control signal circuits operated by batteries. The requirements of this article shall apply to battery-charging panels if current is taken from light or power circuits.

Section 3842, Application of Other Articles: Switches, circuit breakers and overcurrent devices used on panelboards, switchboards, and distribution boards, also the boards and their enclosures, shall conform to the requirements of Articles 240, 370, 380, and other articles which apply. Switchboards and panelboards in hazardous locations shall conform to the requirements of Article 500.

Section 3843, Support of Bus Bars and Conductors: Conductors and bus bars on a switchboard, panelboard or control board shall be so located as to be free from mechanical injury, and shall be held in such a manner as to be rigid.

Switchboards

Section 3851, Location of Switchboards: Switchboards which have any exposed live parts shall be located in permanently dry locations and then only where under competent supervision, and accessible only to qualified persons. In other words, don't hide your switchboard back in some dark and hard-to-get-to place, but, instead set it out in the middle of a nice, dry, light and easily accessible place and then build a nice enclosure all around it, even over it, and then you'll not have too many worries about someone meddling around it.

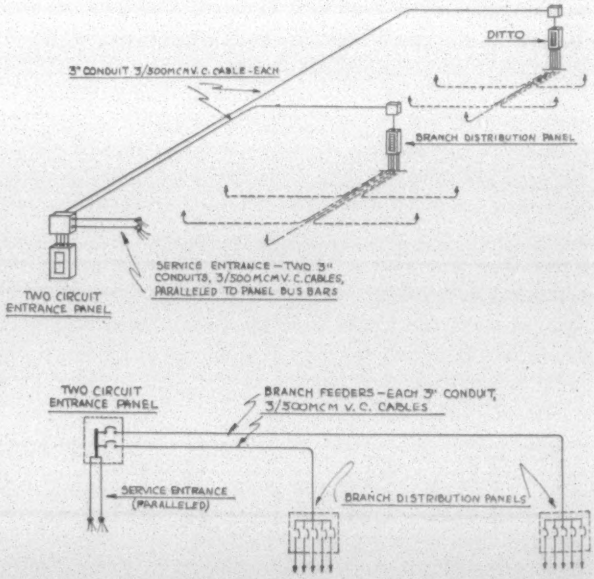
Section 3852, Wet Locations: If a switchboard is in a wet location, or outside of a building, it shall be enclosed in a weatherproof enclosure or cabinet, installed to conform to Section 3732 (January, 1948, TEXTILE BULLETIN).

Section 3853, Location Relative to Easily-Ignitible Material: Switchboards shall be so placed as so to reduce to a minimum the probability of communicating fire to adjacent easily-ignitible material

Section 3854, Clearance from Ceiling: Switchboards shall not be built up to a non-fireproof ceiling, but there must be left a space of three feet between the ceiling and the board, unless an adequate fireproof shield is provided between the boards and the ceiling. This is a matter of vital importance to you from the standpoint of your insurance company, some of which permit the use of such material as Johns-Manville asbestos mill board in the standard available thickness of $\frac{3}{16}$ of an inch, as this is usually in stock in someone's warehouse near you. Guy Trexler, master mechanic for Aleo Mfg. Co., Rockingham, N. C., has just completed lining the ceiling and beams of his new switchboard room with this material, with which he accomplished a beautiful job.

Section 3855, Clearance Back of Switchboard: If the equipment or wiring on the back of the switchboard is accessible only from the space behind it, there shall be clear space of at least 18 inches between such equipment or wiring, and the wall for a single panel switchboard not over 42 inches in width, and at least 24 inches when the board consists of a wider panel or more than one panel. If the space behind the board is accessible only from one end, these spaces shall be increased by at least six inches. The space back of the board shall be kept clear of foreign material and shall not be used for storage purposes. In other words, keep 'em clean!

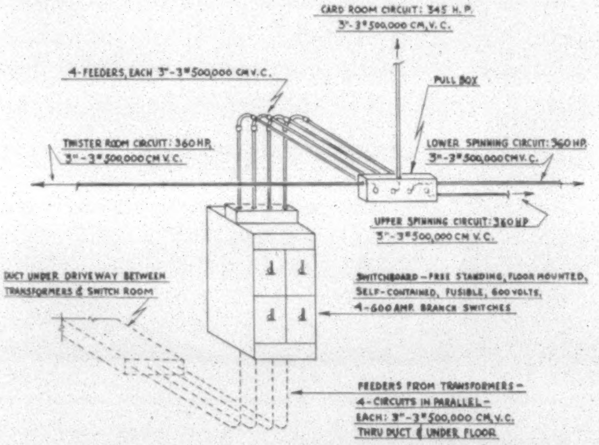
Reduction of these clearances for short intervals by building columns behind the switchboard, or by equipment on a single panel in the switchboard, is permitted provided the clearances are not reduced below those required for a single panelboard. In other words, remember that 18 inches is the minimum clearance in any case. (Some of the above dimensions are exceptions to Section 1112—see later.) Mr. Trexler has found that a minimum clearance of two feet around his switchboard is about right for working with tools and handling circuit breaker parts, etc. Also, Joe Little, master mechanic at Locke Cotton Mills, Concord. N. C., has found this fits his requirements, too.


DITTO
3" CONDUIT 3/500MCM V.C. CABLE-EACH
BRANCH DISTRIBUTION PANEL
SERVICE ENTRANCE—TWO 3" CONDUITS, 3/500MCM V.C. CABLES, PARALLELED TO PANEL BUS BARS
TWO CIRCUIT ENTRANCE PANEL
TWO CIRCUIT ENTRANCE PANEL
BRANCH FEEDERS—EACH 3" CONDUIT, 3/500MCM V.C. CABLES
SERVICE ENTRANCE (PARALLELED)
BRANCH DISTRIBUTION PANELS

At top is an isometric drawing of the electrical system being installed at Carolina Asbestos Co., Marshville, N. C. It consists of a two-circuit entrance panels of the circuit-breaker type, with a service entrance of two three-inch conduits with three 500,000 circular mil. cables of the varnished cambric type paralleled to the bus bars on the entrance panel. The feeders to the two branch panels are three-inch conduit and three 500,000 circular mil. varnished cambric cables each to the branch distribution panels where they are broken down into smaller circuits for use on various machines, etc. The code allows as many as six switches in a group as disconnecting means for entrances, which will save the expense of furnishing and installing an extremely large size entrance switch as the main switch for several smaller switches. This has proven to be a very economical installation. Bottom drawing is a one-line diagram further illustrating this system.

Section 3856, Conductor Covering: Insulated conductors where closely grouped, as on the rear of switchboards, shall each have a flame-retardant outer covering. The conductor covering shall be stripped back a sufficient distance from the terminals so as not to make contact with them. Insulated conductors used for instrument and control wiring on the back of switchboards shall be flame-retardant, either inherently or by means of an outer covering, and be one of the following types: R, RH, V, AVA, AVB, T, or TA.

Section 3857, Protection of Instrument Circuits: Instruments, pilot lights, potential transformers, and other switchboard devices with potential coils, except where the operation of the overcurrent device might introduce a hazard in the operation of devices, shall be supplied by a circuit that is protected by standard overcurrent devices (fuses, etc.) of a rating not greater than 15 amperes, except that for ratings of two amperes or less, special types of enclosed fuses may be used.


CARD ROOM CIRCUIT: 345 H.P.
3"-3#500,000 CM, V.C.
4-FEEDERS, EACH 3"-3#500,000 CM V.C.
PULL BOX
TWISTER ROOM CIRCUIT: 360 HP.
3"-3#500,000 CM V.C.
LOWER SPINNING CIRCUIT: 360 HP.
3"-3#500,000 CM V.C.
UPPER SPINNING CIRCUIT: 360 HP
3"-3#500,000 CM V.C.
DUCT UNDER DRIVEWAY BETWEEN TRANSFORMERS & SWITCH ROOM
SWITCHBOARD – FREE STANDING, FLOOR MOUNTED, SELF-CONTAINED, FUSIBLE, 600 VOLTS, 4-600 AMP. BRANCH SWITCHES
FEEDERS FROM TRANSFORMERS – 4-CIRCUITS IN PARALLEL – EACH: 3"-3#500,000 CM, V.C. THRU DUCT & UNDER FLOOR

Showing the application of a switchboard of the free-standing, floor-mounted, self-contained type, fusible, 600 volts, with four 600-ampere branch switches. The feeders from the transformers come under the driveway between the transformers and the switchroom through a self-draining concrete ductway into the bottom of the switchboard and are four circuits in parallel, each being three-inch conduit with three 500,000 circular mil. varnished cambric cables. You will notice going out the top of the four branch circuits, one circuit going to the twister room panel, one circuit to the card room panel, one to the lower spinning room panel and one to the upper spinning room panel. This allows for a well-balanced and uniform electrical distribution in the No. 2 plant of Glen Raven Cotton Mills at Kinston, N. C.

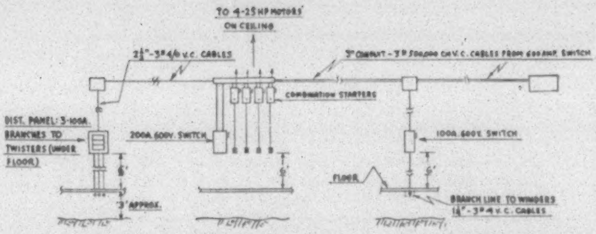
Section 3858, Grounding Switchboard Frames: Switchboard frames and structures supporting switching equipment shall be grounded, except that frames of direct-current single-polarity switchboards need not be grounded if effectively insulated.

Section 3859, Grounding of Instruments, Relays, Meters and Instrument Transformers on Switchboards: Instruments, relays, meters and instrument transformers located on switchboards shall be grounded as specified in Sections 2621 to 2625.

Panelboards

Section 3881, Number of Overcurrent Devices on One Panelboard: Not more than 42 overcurrent devices of a lighting and appliance branch circuit panelboard shall be installed in any one cabinet or cutout box.

Section 3882, Overcurrent Protection: Except as installed for services as in Paragraph a-3 of Section 2371, a panelboard supplied by conductors having overcurrent protection greater than 200 amperes shall be protected on the supply side by overcurrent devices having a rating not greater than that of the panelboard. Snap switches rated at 30 amperes or less and employed in panelboards shall have overcurrent protection not in excess of 200 amperes.


TO 4-25 HP MOTORS ON CEILING
2½"-3#4/0 V.C. CABLES
3" CONDUIT - 3 # 500,000 CM V.C. CABLES FROM 600 AMP. SWITCH
COMBINATION STARTERS
DIST. PANEL: 3-100A. BRANCHES TO TWISTERS (UNDER FLOOR)
200A. 600V. SWITCH
100A. 600V. SWITCH
6'
6'
6'
FLOOR
3' APPROX.
BRANCH LINE TO WINDERS 1¼"-3#4 V.C. CABLES

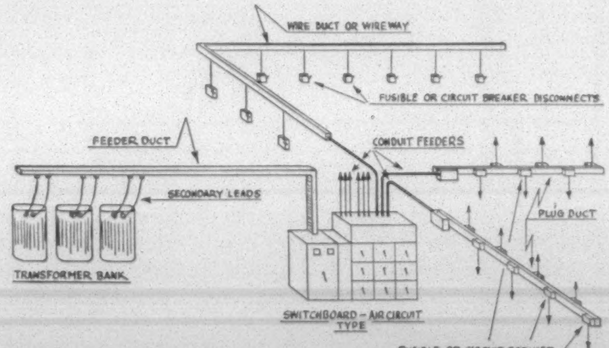
Twister room circuit details of the Glen Raven Plant No. 2 at Kinston, N. C., which includes power distribution groups and distribution panel for the twisters which indicates the efficiency of the panel type arrangement or wiring.

Section 3883, Panelboards in Damp or Wet Locations: Panelboards in damp or wet locations shall be installed in conformity to Section 3732.

Section 3884, Enclosure: Panelboards shall be mounted in cabinets or cutout boxes.

Section 3885, Relative Arrangement of Switches and Fuses: Panelboards having switches on the load side of any type of fuses shall not be installed except for use as service equipment as provided in Section 2375. In general, panelboards offer the most compact means of arranging an electrical system in textile mills, whether the requirements be for either power or lights, and such arrangements in connection with switchboards have been found to be most satisfactory. In such installations, the switchboard feeds the branches, and the branches go to the various panelboards which are located at the various load centers in the mill.

For example, take the installation of panelboards in the new spinning room of Aloe Mfg. Co., or in the spinning room of the Locke Cotton Mills, at Safie Mfg. Co., Rockingham, N. C., or at Glen Raven Mills No. 2, Kinston, N. C. In each case the panelboards were fed by a circuit of 3-500,000 C. M. Varnished Cambric Cables in three-inch conduit from a 600-ampere branch on the switchboard, which was fused down to 450 amperes. The branches from the panelboards usually were, in those jobs mentioned above, limited to 100-ampere branch switches fused to 100 amperes, and having circuits of three No. 1 Type R Cables, three No. 2 Type RH Cables, both in 1½-inch conduit, or three No. 2 Varnished Cambric Cables in 1¼-inch conduit. These branches have been used as feeders for groups of eight 7½-horsepower motors, or eight ten-horsepower motors or four 15-horsepower motors, in such installations as on spinning and twisting frames, etc.


WIRE DUCT OR WIREWAY
FUSIBLE OR CIRCUIT BREAKER DISCONNECTS
FEEDER DUCT
CONDUIT FEEDERS
SECONDARY LEADS
PLUG DUCT
TRANSFORMER BANK
SWITCHBOARD – AIR CIRCUIT TYPE
FUSIBLE OR CIRCUIT BREAKER PLUG-IN UNITS – ONE FOR EACH BRANCH CIRCUIT

Illustrating the advantage of a switchboard group for service entrance in a large plant where there are more than six entrance switches or circuit breakers with a main breaker ahead of the whole group of branch switches. This emphasizes the advantages of the compact type of self-contained air circuit breaker switchboards.

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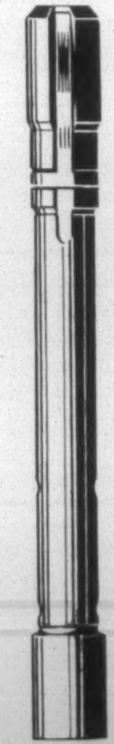

MILL NEWS

CONSTRUCTION. NEW EQUIPMENT. FINANCIAL REPORTS. CHARTERS. AWARDS. VILLAGE ACTIVITY. SALES AND PURCHASES

Monroe, N. C.—Plans have been revealed for establishing a large weaving mill, employing about 400 persons, in the Camp Sutton area. Name of the operating firm has not been disclosed, but the new owners are said to have similar plants in Pennsylvania, New York and the South. It is reported that Egyptian cotton will be used in the new plan for the manufacture of broadcloth.

Cowpens, S. C.—Cowpens Cotton Mills has been sold by Leading Embroidery Co. to Linda Cotton Mills, Inc., New York, for $839,680. Real estate consideration was $165,060, while equipment and machinery brought $674,619. Equipment included 74 cards, 502 looms, of which 189 are 40½-inch and 313 are 45½-inch Draper models, pickers and other equipment.

Spartanburg, S. C.—A general village and plant improvement program, together with development of a new safety program, are among current undertakings at the Mills Mill plant here, formerly known as Saxon Mills. A first aid clinic has been established on the first floor of the plant and approximately 200 houses are included in the program for repainting, rewiring and yard beautification.

New York, N. Y.—Colonial Mills, Inc., has announced consolidated net earnings of $7,133,691 on net sales of $34,800,682 for the year ended Nov. 30, 1947, after taxes and all other charges, and after giving effect to net non-recurring income of $263,630. This net profit is equal to $8.97 a share on the 794,952 shares of $5 per capital share outstanding. This compares with a net profit of $3,366,732, or $4.24 per share on net sales of $29,296,779 for the year ended Nov. 30, 1946, after giving effect to the two-for-one stock split approved in April, 1947, and the five per cent stock dividend paid on Nov. 24, 1947. Colonial operates a finishing plant at Clarksville, Va., and mills at Robbins, Aberdeen and Red Springs, N. C.

Bristol, Va. — Bigelow-Sanford Carpet Co., Inc., New York, whose enterprises include operation of Bristol Mills, reports net sales in 1947 totaling $62,872,093, an increase of 60 per cent over the $39,222,359 reported for 1946. Net income of $3,846,729 is reported for the year ended Dec. 31, 1947. Earnings for 1947 were equivalent to $10.64 per share on the 309,109 shares of common stock after deducting $400,000 as a reserve for contingencies. This compares with net profit of $1,248,095, or $3.53 per share, for the year 1946 on 308,609 shares of common stock then outstanding.

Cleveland, O.—Industrial Rayon Corp. reports net sales in 1947 totaling $48,059,000 as compared with $39,059,000 in 1946, an increase of $9,000,000. Net income of the corporation for the year 1947 was $13,460,416, which is equal to $8.86 per share of common stock. This compares with net earnings of the preceding year of $5.66 per share of common stock. The earnings per common share include the profit from payments received from the sale of certain foreign patents in the amount of $1.89 per share. Thus, the net earnings for 1947, excluding such income, were $6.97 per share.

Lancaster, S. C.—Bids were received March 15 for construction of an office building at Springs Cotton Mills. Engineer for the proposed structure is Robert & Co., Atlanta, Ga.

Tarboro, N. C.—Hart Cotton Mills is planning construction of an addition to its plant here.

Balfour, N. C.—Berkeley Mills, Inc., is constructing a 32 by 212-foot brick and steel addition to house an additional 2,600 reconditioned spindles.

Hillsboro, N. C.—Belle Vue Mfg. Co. is installing 24 new Whitin cards and three new H. & B. American automatic pickers. Six new drawing frames already have been installed and are in operation.

Greenville, S. C.—As of April 1 Woodside Cotton Mills Co. will be capitalized at $4,000,000, including all plants. The chain includes the Greenville Plant, Simpsonville Plant, Fountain Plant at Fountain Inn, Easley Plant and Liberty Plants No. 1 and No. 2.

Elizabethton, Tenn.—Seven directors of North American Rayon Corp. and American Bemberg Corp. have resigned and the director of the Office of Alien Property will name six of eight directors to be elected at a special meeting March 25. The resigning directors are William Gage Brady, Jr., president of the National City Bank, New York; Beveridge C. Dunlop, formerly a vice-president of the two rayon companies; Monroe C. Gutman, a partner in Lehman Bros.; Rufus W. Scott, a director of Hemphill Co., Pawtucket, R. I.; Eustace Seligman, Sullivan & Cromwell; B. A. Tompkins, president of Bankers Trust Co., New York; and Henry P. Turnbull, a trustee of Central Hanover Bank & Trust Co.

Tucapau, S. C.—Installation of modern stainless steel equipment at the Startex Mills bleachery has been completed and the machinery is now operating at near-capacity production. The new equipment makes possible an output of 200 yards per minute.

Columbus, Ga.—Swift Mfg. Co. plans construction soon of a three-story addition, to be used for storage purposes. The addition will cost approximately $35,000.

Biscoe, N. C.—Aileen Mills Co., Inc., has completed construction of an office building of brick construction costing $8,000 and the adjoining old office has been modernized with fluorescent lights throughout.

Kings Mountain, N. C.—Inability to obtain motors of the proper type has delayed opening of Walmore Mills, Inc., which was scheduled to begin initial operations Feb. 20. Plant officials stated, however, that production would begin probably sometime in March. The new enterprise will manufacture terry and Turkish towels.

Mount Holly, N. C.—American Yarn & Processing Co. and subsidiaries, excluding Efird Mfg. Co., showed a gain in sales for 1947, over 1946, but the net profit was lower than in the previous year. After provision for taxes, the net was $1,405,467, or $3.37 per common share on 399,548 shares outstanding, for the year ended Dec. 31, compared with $1,701,149, or $4.19 a share in 1946. Net sales for 1947 totaled $18,596,331, an increase of $1,612,837 over 1946 sales of $16,983,494.

Easley, S. C.—Glenwood Cotton Mills has been sold to Joshua L. Bailey & Co., Inc., of New York. B. F. Hagood, president and treasurer of Glenwood, said that there would be no change in management personnel. He will continue in his present position and J. J. Sims continues as secretary. The plant utilizes 45,648 spindles and 1,160 looms in the production of wide print cloths.

Glendale, S. C.—An $18,000 payroll was stolen last month when thieves broke into a safe at Glendale Mills. Officials said the robbery was similar to a recent $5,000 safe robbery at Franklin Process Spinning Mill, Fingerville.

Dallas, N. C.—Morowebb Cotton Mills Co., recently purchased by Macanal Textile Corp. of New York City, plans a $60,000 addition to its facilities. Space in the carding department will be increased by about 20 per cent and the winding, finishing and packing department will be enlarged. It is expected that construction costs will be about $30,000, and new machinery another $30,000.

Danville, Va. — Stockholders of Dan River Mills, at a meeting March 11, ratified a recommendation relating to an employees' retirement plan to be effective May 1. The pension plan emoluments, plus the social security income, would give the worker about 40 per cent of his current earnings. The employee would contribute approximately 40 per cent of the retirement money. The cost to the company at the outset of the plan will be over $3,000,000. Directors of the firm re-elected George S. Harris, president and treasurer, and made no other changes in the executive staff.

New Holland, Ga.—Pacolet Mfg. Co. Mill No. 4, in recognition of its outstanding record of 2,679,935 hours without a lost-time accident, has been awarded the Deering, Milliken safety trophy. The record was attained in competion with 20 other mills of the Deering, Milliken group.

Greensboro, N. C.—Burlington Mills Corp. liquidated 18 of its subsidiaries in the fiscal year ended Sept. 27, 1947, it was revealed in the firm's annual report to the Securities and Exchange Commission. Subsidiaries liquidated were White Sulphur Industries, Inc., Sequoia Realty Corp., Altown Realty Corp., Sun Spun Mfg. Co., Inc., Sun

Spun Sales Corp., Cetwick Silk Mills Corp., Burlington Dyeing & Finishing Co., Inc., Burlington Hosiery Sales Co., Inc., Russell Watkins Corp., Vamoco Mills Co., McLaurin Hosiery Mills, Inc., Ranlo Mfg. Co., Steele Mfg. Corp., Salem Full Fashioned Hosiery Mills, Inc., Burlington Mills Hosiery Co., Grayson Full Fashioned Hosiery Mills, Inc., Wadesboro Full Fashioned Hosiery Mills, Inc., and Robeson Textiles, Inc.

Greenville, S. C.—J. P. Stevens & Co., Inc., New York, recently purchased approximately 800 acres of land in upper Greenville County for "potential future development in that area."

Greenville, S. C. — Stockholders of Judson Mills were scheduled to meet March 27 to consider a resolution proposing that the corporation go into liquidation, wind up its affairs and dissolve.

Neuse, N. C.—Diana Mills, which has been closed for some time, is now operating under the trusteeship of W. H. Hofsler of Durham, N. C. W. T. Worrels is manager.

Calhoun Falls, S. C.—The two-story addition to Calhoun Mills, which will increase the mill's manufacturing space by about 40,000 square feet, is expected to be completed about April 15. The structure will be used for carding and spinning and several months will be required for installation of air conditioning and manufacturing equipment. About 1,000 spindles will be added when the enlargement program is completed, bringing the mill's total spindles to 59,200.

Slater, S. C.—Slater Mfg. Co., a wholly-owned subsidiary of J. P. Stevens & Co., Inc., New York, will be dissolved sometime in the fiscal year ending Oct. 31, 1948. This information was revealed in Stevens' annual report to the Securities and Exchange Commission, Washington.

Pendleton, S. C.—Initial construction work on the Deering, Milliken plant here has been hampered by inclement weather. Engineers state, however, that the plant will probably be completed on schedule. Approximate cost of the new structure is $4,000,000.

Macon, Ga.—The U. S. Supreme Court, Washington, last month denied the Bibb Mfg. Co. a review of a decision that in computing overtime pay under the federal wage-hour law a "production bonus" must be included as part of the "regular rate of pay."

Dublin, Va.—Operations at the finishing plant here of Burlington Mills Corp. were expected to begin on a small scale the latter part of March. Operations will be expanded as additional steam and water facilities are made available. The Dublin properties were purchased last year from the War Assets Administration.

Macon, Ga.—Fire in a dry room at Bibb Mfg. Co. Mill No. 1 in East Macon recently was extinguished before major damage was done. Automatic sprinklers drowned the blaze, which is believed by firemen to have been started by a spark from machinery. Cotton lint was ignited. Damage was confined largely to the machine through which cotton is run to be dried.

Graniteville, S. C.—Capital stock of the Graniteville Co. has been increased from $4,000,000 to $8,000,000. The firm is one of the oldest in South Carolina, having been chartered in 1845 by an act of the General Assembly.

469 Mills in N. C. Safety Contest

The 13th annual Statewide Textile Safety Contest, sponsored by the North Carolina Industrial Commission and the North Carolina Cotton Manufacturers Association, started Jan. 5, 1948, with the largest registration on record. A total of 469 mills, employing approximately 172,350 persons, are participating. "We are indeed gratified by this large registration," T. A. Wilson, chairman of the Industrial Commission, said. "This fine co-operation indicates in no uncertain terms that the textile mills in our state are determined to do everything within their power to stop the tremendous loss of manpower caused each year on account of industrial accidents."

The 1947 contest registered 453 mills, with 99 per cent of those entering completing all periods of the contest. This was a larger registration and a larger percentage of mills completing the contest than in any previous year. "Statewide safety contests have passed the experimental stage," Mr. Wilson said. "During the 12 years the textile contest has been operating in North Carolina the compensation insurance rate has been reduced considerably. This means an annual savings of thousands of dollars to the industry in our state."

The annual North Carolina contest runs for a period of 34 weeks, beginning with the first payroll week in January and ending with the last payroll week in August. Participating mills are divided into groups, according to the average number of employees during the contest period. The mill in any particular group having the least number of accidents is presented a suitable award by the North Carolina Cotton Manufacturers Association, and all mills completing the contest without a lost-time accident receive Certificates of Merit showing this achievement.

IN ATTENDANCE at annual dinner of North Carolina Textile Foundation, Inc., last month. Left to right: Herman Cone, President of Cone Mills Corp.; John W .Clark, president of Randolph Mills and Locke Cotton Mills; Aaron B. Quinn, assistant to W. J. Carter, president of Carter Fabrics Corp.; David Clark, editor of TEXTILE BULLETIN; Dean Malcolm E. Campbell of the North Carolina State College School of Textiles; and J. C. Cowan, president of Burlington Mills Corp. The dinner was held at Greensboro, N. C., Feb. 10.

Firm Announces Textile Design Contest

The second national student competition for textile designs suitable for weaving on the Jacquard loom has been announced by the Rose Mfg. Co., Philadelphia, Pa., sponsors of the contest. Competition will be limited to students in recognized art and textile schools in the United States or its possessions and entries may be submitted during the May 15-31 period. Judges will meet as soon as practicable after May 31 to select the winners of the first, second, and three third prizes of $500, $200 and $100 each, respectively.

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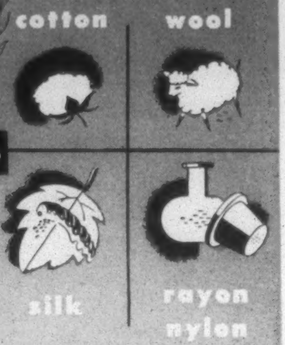

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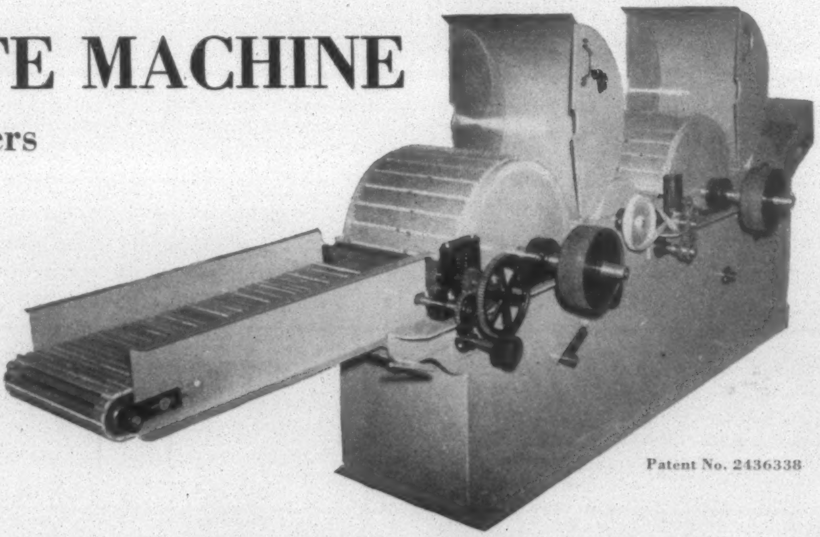
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Double Reversible Feed Rolls.

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6 reasons why you should standardize on

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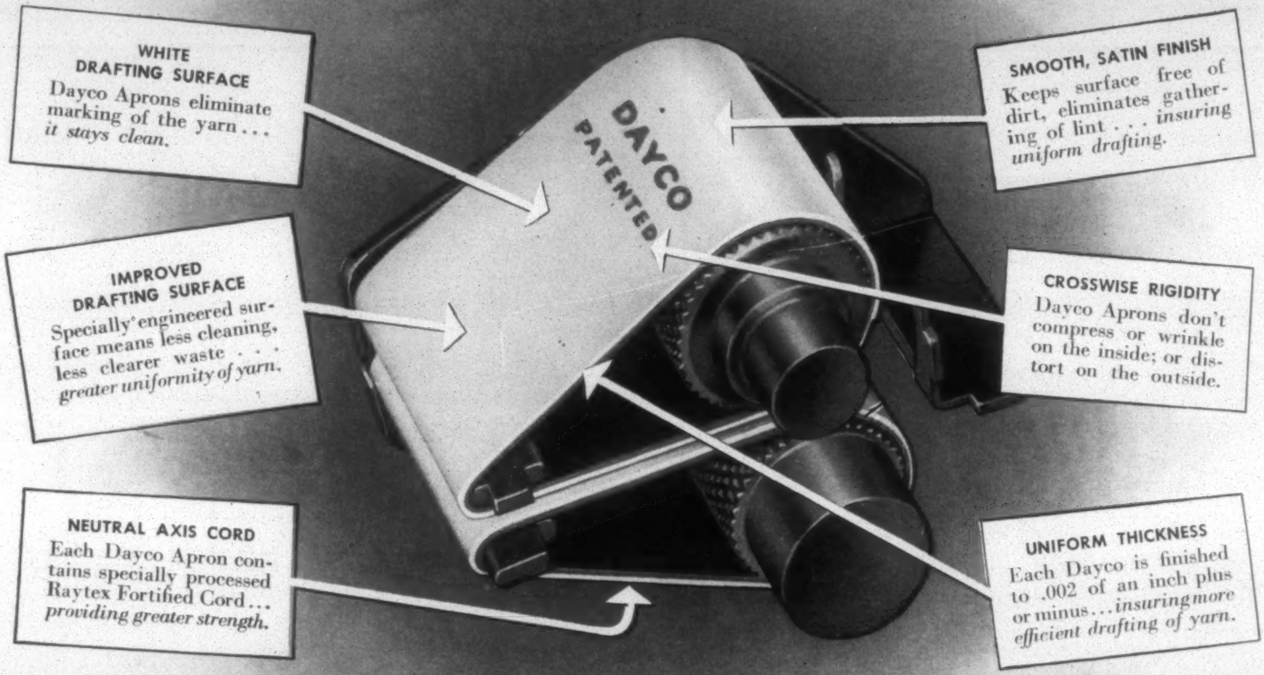


WHITE DRAFTING SURFACE
Dayco Aprons eliminate marking of the yarn . . . *it stays clean.*

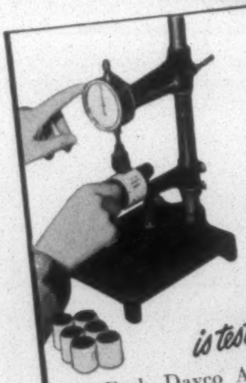
IMPROVED DRAFTING SURFACE
Specially engineered surface means less cleaning, less clearer waste . . . *greater uniformity of yarn.*

NEUTRAL AXIS CORD
Each Dayco Apron contains specially processed Raytex Fortified Cord . . . *providing greater strength.*

SMOOTH, SATIN FINISH
Keeps surface free of dirt, eliminates gathering of lint . . . *insuring uniform drafting.*

CROSSWISE RIGIDITY
Dayco Aprons don't compress or wrinkle on the inside; or distort on the outside.

UNIFORM THICKNESS
Each Dayco is finished to .002 of an inch plus or minus . . . *insuring more efficient drafting of yarn.*



and, in addition, every DAYCO APRON

is tested for thickness!

Each Dayco Apron is tested to meet your specifications for single or double apron systems. Inside diameters are held to $\frac{1}{64}$" and thickness to .050, + or − .002 . . . another reason Daycos draft up to 10 percent more uniform yarn.

The above are but *a few of the many* reasons leading mill men insist on Dayco Long Draft Aprons for every frame in their spinning rooms.

Important, too, is their nonstretch feature that keeps them on the frames when you start up. Nondirectional Daycos can be put on either way. They are manufactured without laps or splices and are finished smooth inside without rib.

Dayco Long Draft Aprons are designed to handle natural or synthetic fibers better, more economically. If you aren't using Daycos on your frames, it will pay you to write for additional information, or have one of our textile machine accessory engineers call on you. He can show you additional ways to economical production of better yarn. Write The Dayton Rubber Co., Dayton, Ohio, or *Textile Division—Main Sales Office, Woodside Building, Greenville, S. C.*

Dayton Rubber

Promotions, Resignations, Honors, Transfers, Appointments, Elections, Civic and Associational Activities

PERSONAL NEWS

George H. Hightower, vice-president and director of Thomaston (Ga.) Cotton Mills, was married March 19 to Miss Dorothy Watson of Moultrie, Ga.

Charles W. Carvin has resigned as a director and vice-president in charge of sales of Industrial Rayon Corp., Cleveland, Ohio. In announcing his resignation, Mr. Carvin said he was desirous of entering business for himself and was considering several propositions.

W. A. Pridmore, formerly associated with Riegel Textile Corp., is now general overseer of weaving at Hartsville (S. C.) Cotton Mill. Mr. Pridmore succeeds B. G. Mullinax, who resigned to accept a position in Cornelius, N. C.

W. C. Napier, Jr., has announced his resignation as vice-president and Chicago representative of Comer-Avondale Mills, Inc. Mr. Napier, who has been selling the products of the Avondale and Cowikee Mills for the past 25 years as a member of the various organizations that have represented those mills, revealed that he had resigned in order to give more of his time to the interests of the Grove Nylon Co., who he has represented since 1941 with the exception of 18 months spent in military service.

Thomas Eble, bio-chemist, has joined the staff of Harris Research Laboratories, Washington, D. C., as research associate, and Virginia Giles, home economics specialist, has joined the Harris staff as a laboratory technician.

Dr. Harold Naidus, formerly senior chemist for Publicker Industries, has joined the research staff of the American Polymer Corp., Peabody, Mass., where he will do research and development work in high polymers for application to the adhesive, coating and textile industries.

G. E. Budd, field project manager for construction of the $20,000,000 nylon yarn plant of E. I. du Pont de Nemours & Co., Inc., at Chattanooga, Tenn., has been transferred to another assignment. Carroll S. Anderson has been appointed to complete building operations at Chattanooga.

Robert L. West, purchasing agent for the Goodyear Tire & Rubber Co. textile plant at Atco, Ga., has been presented a 20-year service pin. Miss Ellen Soper, secretary of Superintendent G. I. Parmenter, has been awarded a five-year pin.

Frank D. Lindquist was named general superintendent, a newly created position, at the recent annual meeting of directors of Crompton & Knowles Loom Works, Worcester, Mass. John F. Tinsley was re-elected president and general manager for his tenth consecutive year in both positions. Rufus S. Frost was re-named treasurer and Albert W. Muir, Jr., assistant treasurer.

Carl Whiteman of New York has been appointed general sales manager of Clinton (Iowa) Industries, Inc. Clinton manufactures corn products, including starches, as well as a line of package goods.

A. W. Reynolds has been appointed assistant to the executive sales manager for Southern Alkali Corp. and the Columbia Chemical Division of Pittsburgh Plate Glass Co. He will make his headquarters in Pittsburgh, Pa.

James R. Hill, left, has been named manager of the textile division, Atlanta territory, for Corn Products Sales Co. of New York. A native of North Carolina, Mr. Hill has lived most of his life in Greensboro. During high school and college years he implemented his knowledge of the textile industry by working in various departments of a large Greensboro cotton mill. . . . He received his B.S. degree in textile chemistry and dyeing from North Carolina State College, Raleigh, in 1936. . . . Mr. Hill was released from the Navy in December, 1945, and joined Corn Products in February, 1946.

Fred E. Antley, Southern sales representative for the Danielson (Conn.) Mfg. Co., with headquarters in Greenville, S. C., has been elected vice-president of the concern. Mr. Antley has resided in Greenville for the past 33 years.

Robert W. Linscott, assistant general superintendent of the Lincoln Mills of Alabama, Huntsville, has been promoted to assistant treasurer and will be connected with the Boston, Mass., office of the firm.

Ben C. Thomas, who was a field representative for TEXTILE BULLETIN in pre-war years, has rejoined the magazine's staff in the same capacity. He is a son of Mrs. Ethel Thomas Dabbs (Aunt Becky), who is widely known in the Southern textile industry.

Horace Whitmire of Brandon Corp., Greenville, S. C., has been elected president of the Southern Textile Athletic Association for 1948-49. A former president of the group, Mr. Whitmire succeeds C. H. Thomas of Duncan Mills, Greenville, president for the past two years.

Leonard T. Beale, president of the Pennsylvania Salt Mfg. Co., has been elected a member of the National Industrial Conference Board. The conference board, founded in 1916, is an independent and non-profit organization for research and education in the fields of economics and business.

Edwin B. Callaway, formerly city editor of *The Mobile Register*, Mobile, Ala., has been appointed a roving editor for Textile Information Service and will cover textile mill activities in Alabama and Georgia.

William L. Craven, formerly general supervisor of the Plaid, Mayfair and Bellemont plants of Burlington Mills Corp. at Burlington, N. C., has been made group manager of the four spun weaving plants of the firm at Rockingham, Mooresville, Franklinton and Newton, N. C. . . . Thomas S. Tolar, superintendent of the Central Falls, N. C., plant, has been named to succeed Mr. Craven.

John A. Handy, Jr., controller of Deering, Milliken & Co., Inc., New York, has been elected to membership in the Controllers Institute of America. Top financial executives of 3,022 leading American companies in every branch of industry are members of the institute. It was founded in 1931.

C. S. Tatum, secretary of Pilot Mills Co., Raleigh, N. C., is in Florida on an extended vacation.

Claud M. Hendrix is now night cotton mill superintendent at Crystal Springs Bleachery, Chickamauga, Ga. He previously was associated with New York & New Jersey Lubricant Co.

Jared J. Mowry of Hartsville, S. C., a vice-president of the United States Finishing Co., Norwich, Conn., has been elected general manager of the concern and vice-president and general manager of its subsidiary, Queen Dyeing Co., Providence, R. I. Mr. Mowry also is executive vice-president and general manager of the company's Southern subsidiary, the Hartsville (S. C.) Print and Dye Works.

Alexander W. Bell, native of Anderson, S. C., formerly superintendent of the Sycamore (Ala.) Division of Avondale Mills, has become associated with the American Yarn & Processing Co., Mount Holly, N. C., and at the recent annual meeting of directors was elected general manager of manufacturing, assistant vice-president and a director of the firm and its subsidiaries. . . . Two promotions made by the directors included the appointment of T. J. Davis, formerly assistant secretary and assistant treasurer, to a vice-presidency, and the election of Frank H. McKinney to succeed Mr. Davis. . . . A. J. Bonner, formerly with the research department of American Viscose Corp., is now general superintendent of the worsted division of Spun Fibers, Inc., Whitnel, N. C., a subsidiary of American Yarn & Processing Co. Other new A. Y. P. executives are R. W. Faires, superintendent of the Union Plant at Maiden, N. C., formerly associated with Hudson Mfg. Co.; and R. C. Holcombe, general overseer of the acetate department at Spun Fibers, Inc., who comes to his new post from Central Yarn & Dyeing Co., Gastonia, N. C.

M. L. Dixon of Brevard, N. C., is now overseer of the card room at Belle Vue Mfg. Co., Hillsboro, N. C.

William H. Deyo has been named chairman of the board and treasurer of the Anniston (Ala.) Mfg. Co. W. B. Pennington, former secretary and office manager, has been appointed vice-president and secretary. Fred O. Tyler, who was president of the firm since 1940, died recently, and for the present the company will continue to operate without a president.

Arthur G. Odell, president and treasurer of Kerr Bleaching & Finishing Works, Inc., Concord, N. C., has been elected president of the Concord National Bank. . . . John C. Borden, president of Borden Mills, Inc., recently was elected a member of the board of directors of the Bank of Manhattan Co., New York, to succeed his uncle, Bertram Borden.

Thomas D. Russell, president of the Russell Mfg. Co., Alexander City, Ala., is the new chairman of the board of trustees of the George Washington Carver Foundation. He was unanimously elected at the annual meeting of the board held recently at Tuskegee Institute.

Col. J. Norman Pease, widely known in the textile industrial engineering field, has been elected president of the Charlotte (N. C.) Chamber of Commerce. . . . E. A. Terrell, Sr., president of the Terrell Co., was elected vice-president of the civic group.

T. H. Skeel has been appointed zone manager of the Southern Division of Mobilift fork lift trucks, used extensively in the textile industry. Mack Anderson, formerly with the Charlotte Division of Lewis-Shepard Products, Inc., has been appointed sales representative for North and South Carolina for the Southern Division of the firm, which is located at 1113 Spring Street, Atlanta, Ga.

Pictured at right, below, is H. R. Austin, president of the M. W. Kellogg Co., New York City. Shown at left is Alexander Kidd, vice-president in charge of manufacturing. The firm, a newcomer to the textile machinery field, currently is building looms in its plant at Jersey City, N. J.

O. C. Jones, foreman of the wool picking department at Fieldcrest Mills, Inc., Spray, N. C., has been appointed a commissioner for the Spray Sanitary District.

The Pullman Co. has named a car in honor of the late J. E. Sirrine, Greenville, S. C., who was a national figure in the textile and engineering fields.

L. A. Lee, president of A. J. Showalter Co., Dalton, Ga.; P. E. Findlay, Bibb Mfg. Co., Macon, Ga.; Ralph Ewing, Central Franklin Process Co., Chattanooga, Tenn.; George Hamilton, Crown Cotton Mills, Dalton; Albert Cobble, Tennessee Textile Machinery Co., Chattanooga; and George Rice, First National Bank, Dalton, have been appointed to act as an advisory committee for the Tufted Textile Manufacturers Association on problems of interest and mutual concern of the suppliers and the industry.

Hollis F. Cobb has formed a new firm in Charlotte, N. C., H. F. Cobb Co., which will deal in textile waste and cotton fabrics. For the past two years Mr. Cobb has been sales representative and buyer for Riverside Mills, Augusta, Ga., and previously had served 26 years with Kendall Mills' Southern offices at Paw Creek, N. C.

Milford E. McDonald, formerly principal of the Iva, S. C., high school, has been named personnel manager for Jackson Mills at Iva.

Robert R. McGee has been appointed to the technical staff of the textile division, United States Rubber Co., with headquarters in New York. He was formerly technical supervisor of the company's Reid Mill in Hogansville, Ga., which manufactures duck used in the production of belting, hose and other industrial products. Mr. McGee has been associated with the company's textile division for nine years. He began his career in Hogansville in 1938 after receiving a degree in textile engineering from Clemson College. Later he was supervisor of the laboratory in the company's plant at New Bedford, Mass.

Winston L. May, Jr., has been appointed to the newly-created position of vice-president in charge of all merchandising and advertising activities of the Chicopee Sales Corp., 47 Worth Street, New York City, textile subsidiary of Johnson & Johnson. Formerly advertising and sales promotion manager, Mr. May has been with Chicopee for over eight years. Prior to that he was associated with B. Altman & Co. Mr. May is a member of the executive committee of the textile section of the New York Board of Trade.

Jack Frame, formerly associated with James Jamison Co., has joined the new business department of Meinhard, Greeff & Co., Inc., New York City. He will work on the development of new business in both

TEXTILE INSTRUMENT ENGINEERS who last month completed an intensive course in instrumentation maintenance and operations at the Brown Instrument Co. training school at Philadelphia, Pa. Among the men who took the course, and the mills with which they are associated, were: Bradley Reese, Abbeville (S. C.) Mills; George Veigl, Avondale Mills, Sylacauga, Ala.; Herman Smith, Bath (S. C.) Mills, Inc.; E. O. Rhodes, Bibb Mfg. Co., Macon, Ga.; Douglas Cassada, Carter Fabrics Corp., Greensboro, N. C.; Moses Burnette, Dan River Mills, Danville, Va.; Jack Hancock, Darlington (S. C.) Mfg. Co.; A. J. Talbot, Fulton Bag & Cotton Mills, Atlanta, Ga.; W. H. Miller and R. W. Ramsey, Inman (S. C.) Mills; J. H. Bruce, Johnston (S. C.) Mills, Inc.; Frank Gribble, Judson Mills, Greenville, S. C.; T. J. Durham, John P. King Mfg. Co., Augusta, Ga.; Forest Leach and A. M. Crowder, Lowell Bleachery, South, Griffin, Ga.; Julian Tennett, Monarch Mills, Lockhart, S. C.; L. S. Camp, Pepperell Mfg. Co., Lindale, Ga.; Joseph Gardner, Russell Mfg. Co., Alexander City, Ala.; J. D. Catoe and E. P. Hutson, Springs Cotton Mills, Lancaster, S. C.; Frank Bostic, Thomaston Mills, Griffin, Ga.; Crawford Wesson and Lawson Hanks, West Point Mfg. Co., Shawmut, Ala.; Hoke West and J. M. Gardner, West Point Mfg. Co., Fairfax, Ala.; Bruce Gray, West Point Mfg. Co., Langdale, Ala.; and William P. Bayars, Joanna Cotton Mills Co., Goldville, S. C.

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E. T. Cuddeback, for the past year sales representative in the Allis-Chalmers Atlanta, Ga., district office, has been named manager of the company's Tampa, Fla., district office.

Marston T. Bogert, emeritus professor of chemistry at Columbia University and a former president of the American Chemical Society, has been appointed senior scientific advisor of Evans Research & Development Corp. of New York City. Mr. Bogert is regarded as a world authority on synthetic organic chemistry.

Eugene Lutz has been appointed head of the Burlington Mills Corp. technical division, which includes the supervision of the company's New York laboratory. Mr. Lutz succeeds the late Gordon Young.

John B. Wathey has been elected vice-president in charge of research and development for Bocon Chemical Corp. of New York City. Prior to joining Bocon, Mr. Wathey was connected with Wilbert Products Co. and the Cranston (R. I.) Print Works.

Earl D. McLeod, at left below, research director at Arnold Hoffman & Co., Inc., since 1942, has been promoted to the post of assistant to the president and has been succeeded as research director by Chauncey E. Allard, right, who previously acted as research supervisor. Mr. McLeod was graduated from Massachusetts Institute of Technology in 1933 and first worked in the laboratories of Pacific Mills. He later was in charge of production and laboratories at the Masury-Young Co. in Charleston, Mass., and came to the research staff of Arnold, Hoffman in 1938. Mr. Allard was graduated from Rhode Island State College in 1936 and took his M.S. in 1938. He was employed by Schering Pharmaceutical Corp. for four years before coming to Arnold, Hoffman in 1946. Both men have their offices in the Providence, R. I., headquarters of the company.

William H. Beattie, president of Woodside Cotton Mills Co., Greenville, S. C., will be general chairman of the campaign for funds of the Greenville County chapter of the American Cancer Society which will be held in April. . . . D. W. Broadwell, assistant superintendent of the Monaghan Plant of Victor-Monaghan Co., Greenville, was a colonel in charge of the textile division for the Greenville County Red Cross fund campaign held March 11-18; William H. McCall, overseer of the shipping department at the Southern Weaving Co., Greenville, was a lieutenant-colonel of the division. . . . Burton F. Mitchell, general superintendent and vice-president of American Yarn & Processing Co., Mount Holly, N. C., is serving for the second time as chairman of the drive to raise funds for the Piedmont Council, Boy Scouts of America. . . . Charles Hertwig, president of Bibb Mfg. Co., Macon, Ga., has been named chief of the industrial division for the American Red Cross drive in Macon. . . . John P. Maguire of John P. Maguire & Co., Inc., and Harry J. Delaney, Meinhard, Greeff & Co., Inc., have been named general chairmen of the textile committee in the 1948 Annual Appeal of New York Catholic Charities.

M. Weldon Rogers has been elected a director of Ely & Walker Dry Goods Co., St. Louis, Mo., succeeding E. M. Golden, retired. Mr. Rogers is in charge of the company's textile mill operations.

M. W. Redford has been named technical assistant to the manager of the Roanoke, Va., plant of American Viscose Corp. Mr. Redford, who has been manager of labor relations in the firm's industrial relations depart at Philadelphia, will be succeeded in that position by A. D. Mook.

Dr. Thomas G. Hawley has been appointed director of research at the central laboratories of United Merchants & Manufacturers, Inc., 601 West 26th Street, New York City. Prior to his new appointment, Dr. Hawley was director of Plymouth Laboratories Division of Diversey Corp., Chicago.

Maurice Stanley, for the past 21 years president of the Fafnir Bearing Co., New Britain, Conn., was elected chairman of the board, and Executive Vice-President Stanley H. Cooper was named president to succeed him at the annual meeting of the board of directors March 10.

Dr. Herman A. Bruson has joined Industrial Rayon Corp., Cleveland, Ohio, as head of the high polymer research division.

Jack Dawson Towery is now directing activities at the pilot plant at Riegel Development Laboratories, Inc., Ware Shoals, S. C. A subsidiary of Riegel Textile Corp., the development concern studies a variety of aspects of textile chemistry and production in elaborate and modern laboratory facilities.

Thomas H. Appleton, left, has been appointed district sales manager of the new Link-Belt Co. office in Charlotte, N. C., located at 617 Johnston Building. Mr. Appleton joined the Link-Belt Co. in 1928 at the firm's Philadelphia plant, serving subsequently at the Boston office and factory branch store, and, since 1945, at the Baltimore office as district sales engineer. The Link-Belt home office is at 307 North Michigan Avenue, Chicago.

John Reid, formerly of the export sales division of American Viscose Corp., has joined the acetate rayon sales division of the firm.

Victor B. Shelburne, Jr., a native of Washington, N. C., as joined the staff of the Institute of Textile Technology, Charlottesville, Va., where he will work in the division of chemical engineering. He is a graduate of North Carolina State College, Raleigh, holding the degree of Bachelor of Chemical Engineering. . . . Dr. Burt Johnson, formerly head of the biology division of the Institute of Textile Technology, is now a cotton technologist on the staff of the National Cotton Council at Memphis, Tenn. At Charlottesville Dr. Johnson directed research in microbiological deterioration of textiles and in anti-pollution of streams by textile finishing plants.

Joseph P. Foster, a native of Georgia, has joined Fieldcrest Mills, Inc., Spray, N. C., as an assistant to the director of personnel research and training. . . . Eugene Purcell has joined Fieldcrest as foreman of its new piece dyeing department. His career has included positions with Crystal Springs Bleachery at Chickamauga, Ga., American Finishing Co. at Memphis, Tenn., and Dan River Mills at Danville, Va.

Robert H. Smith, left, for 17 years superintendent of dyeing for Melrose Hosiery Mills, High Point, N. C., has joined the High Point Chemical Mfg. Co. as technical demonstrator and salesman. Mr. Smith is a graduate of N. C. State College, Raleigh, and formerly was with the National Aniline Division of Allied Chemical & Dye Corp., and Durham (N. C.) Hosiery Mills. For many years Mr. Smith has been prominently identified with the American Association of Textile Chemists and Colorists and is at present serving as secretary of the Piedmont Section.

L. G. Sjostrum, vice-president in charge of operations of the Virginia Woolen Co., Winchester, Va., has been elected president of the Shenandoah Valley Manufacturers Association.

Charles H. Dyson has been elected president of Textron, Inc., and executive vice-president of Textron Incorporated. Textron, Inc., is the principal operating subsidiary of Textron Incorporated. Royal Little is president of the parent company and chairman of the board of the subsidiary.

Arthur C. Young, Jr., formerly assistant director of standards for Bibb Mfg. Co. at Macon, Ga., now is manager of standards for Newberry (S. C.) Textile Mills.

Dr. Warren F. Busse, at present director of physical research for General Aniline and Film Corp. at Easton, Pa., has been appointed technical director of the Institute of Textile Technology at Charlottesville, Va.

William E. Wyche, formerly general manager and superintendent at the Gastonia, N. C., spinning and weaving plant of Voit Rubber & Textile, Inc., has been appointed Southern representative for Coleman & Co., factoring concern.

T. D. Meriwether, formerly vice-president and treasurer, has been elected executive vice-president of P. H. Hanes Knitting

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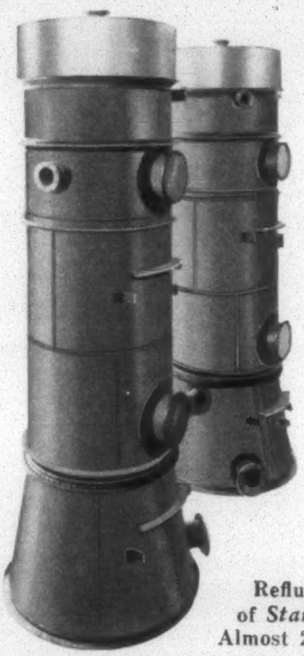

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Co., Winston-Salem, N. C. Officers receiving promotions were P. H. Hanes, Jr., from assistant secretary and assistant treasurer to vice-president; R. A. Lambertson, from secretary and assistant treasurer to secretary and treasurer; J. D. Long, appointed assistant treasurer, and E. E. Maddrey, assistant secretary. P. H. Hanes was re-elected president of the firm. Other officers re-elected were S. B. Hanes, vice-president; E. C. Tompkins, vice-president; and T. O. Moore, vice-president and general counsel. P. A. Shortt and W. W. Cantrell were elected to the board of directors.

OBITUARY

John S. Kindley, 81, retired textile executive of Mt. Pleasant, N. C., died recently at his home. Surviving are a son and a sister.

Fred O. Tyler, 64, president of Anniston (Ala.) Mfg. Co., died Feb. 23. Mr. Tyler was a member of the board of directors of the Cotton-Textile Institute and of the Textile Hall Corp. of Greenville, S. C., and was a former director of the Alabama Manufacturers Association and the American Cotton Manufacturers Association. Surviving are his widow, a daughter and two sisters.

Ernest Montgomery, 87, who retired in 1929 after 52 years in the textile industry, died recently at his home in Summerville, Ga. At the time of his retirement in 1929, Mr. Montgomery was superintendent of Montgomery Knitting Mill, Summerville, and he was the first treasurer and manager of this mill. During his long career he was connected with mills in LaFayette, Carrollton and Rome, Ga., and Columbus, Miss.

George Parker Entwistle, 76, former president of the Pee Dee Mfg. Co. and Entwistle Mfg. Co. of Rockingham, N. C., died March 8 at the home of his daughter in Charlotte, N. C. Mr. Entwistle sold his interests in the Rockingham textile plants several years ago and since that time had been retired. In addition to his daughter, he is survived by three sons, all of Rockingham.

Charles L. Windham, 67, retired textile superintendent of Gastonia, N. C., died Feb. 25 after a lengthy illness. A native of Sumter, S. C., Mr. Windham had been a resident of Gastonia for 28 years and at the time of his retirement several years ago was connected with the old Manville-Jenckes plant in Gastonia.

Walter E. MacAllister, 43, assistant superintendent of production at Steel Heddle Mfg. Co., Philadelphia, Pa., died recently at his home. Surviving are his widow, a daughter and a brother.

Sedwith B. Ellwanger, 63, engineer for Springs Cotton Mills, Fort Mill, S. C., plant, died suddenly March 12 while at work. Mr. Ellwanger had been connected with the Springs organization for 14 years and was widely known in engineering textile circles in the Carolinas.

Samuel Hodges McGhee, 74, prominent business man of Greenville, S. C., and a former president of Panola Cotton Mill in Greenwood and Joanna Cotton Mills Co., Goldville, S. C., died Feb. 25. Surviving Mr. McGhee are his widow, four sons, two sisters and a brother.

Harry R. Drackett, 65, president of Drackett Co., chemical firm of Cincinnati, Ohio, died March 5. Surviving are his widow, three sons and a brother.

James Edward Coburn, 79, vice-president and treasurer of the American Bobbin Co., Lewiston, Me., and a former agent of the Androscoggin Mill, died Feb. 25 at his home. Mr. Coburn, who was also active in banking and civic circles, is survived by two daughter and three grandchildren.

John Henry Thorpe, 73, secretary and treasurer of Cooley, Inc., Providence, R. I., died recently. Mr. Thorpe was formerly sales manager for U S Bobbin & Shuttle Co. and was a founder of Cooley, Inc. Surviving are his widow, two daughters and a brother.

Donald Brown Osborne, 60, vice-president and manager of the Broad River Processing Co., Asheville, N. C., died recently in an Asheville hospital. Considered one of the outstanding sulphur dyers in the country, Mr. Osborne previously had been associated with the Clinton (Mich.) Woolen Mills, Sumter (S. C.) Textile Dye Works and the American Textile Dye Works in Milwaukee, Wis. He was a member of the American Association of Textile Chemists and Colorists.

John F. Jervis of Lima, Ohio, a former president of Springfield (Tenn.) Blanket Mills, died Jan. 21. Closely identified with the textile industry for 45 years, Mr. Jervis also had at one time been connected with Orr Felt & Blanket Mills, Piqua, Ohio; a former partner of the late George F. Swift, trading as Northern Textiles Co.; with Rusch & Co., New York factors; Hanover (Ill.) Woolen Mills and the Philadelphia Quartermaster Department.

Fred C. Bryant, for the past 38 years a field representative in charge of the New York office of Curtis & Marble Machine Co., textile machinery firm of Worcester, Mass., died Jan. 11.

Charles E. Summer, 89, an executive of the old Mollhon Mfg. Co. at Newberry, S. C., died Feb. 20. He is survived by a brother, three daughters and three sons, one of them E. S. Summer, superintendent of Monroe (Ga.) Cotton Mills.

Fred A. Carter, 78, who had been president and treasurer of American Textile Woolen Co., died recently. He also was a vice-president of Sweetwater Hosiery Mills.

William A. Bohne, 51, assistant director of plants for E. F. Houghton & Co., died Feb. 26 at Philadelphia, Pa. He was a member of the board of directors of the oil, leather and metal products firm. His wife survives.

Gerald Donaldson, 79, of New York City, veteran textile man and one of the founding members of the Textile Salesmen's Association, died Feb. 28 after a short illness. Mr. Donaldson, a former president of Henry Doherty Silk Co., had been in retirement since 1928. He is survived by three sons and two daughters.

For The Textile Industry's Use

EQUIPMENT — SUPPLIES — LITERATURE

Testing Firm Expanding Its Research Facilities

The United States Testing Co., Inc., is enlarging its research facilities, according to Allen L. Brassell, president. Under the direction of Dr. T. Smith Taylor, B.A., Ph.D., the research division has established seven planning boards, each designed for different branches of industry and composed of technicians and engineers drawn together for their specific knowledge and experience in each industry. The planning boards, engineering, chemicals, plastics, textiles, foodstuffs, leather and consumer activity are arranged so that each can bring to bear on any problem the vast facilities of the integrated laboratories.

Calco Bulletin Themes Continuous Vat Dyeing

Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J., recently has issued for the industry's use its Calco Technical Bulletin No. 793, *Continuous Vat Dyeing*. The bulletin is divided into two parts: "Selection of Dyes for Continuous Pigment Pad Dyeing Processes," by O. W. Clark of the technical sales service laboratory; and "Laboratory Apparatus for Studying Continuous Dyeing," by C. L. Zimmerman of the research department.

Atlas To Make And Sell National Weathering Unit

National Carbon Co. announces that the Atlas Electric Devices Co., 361 W. Superior Street, Chicago, has taken over the manufacture and sales of the National Weathering Unit Model X1A including repair parts,

DIXON LUBRICATING SADDLES

+

DIXON *LUBRONZE* BEARINGS

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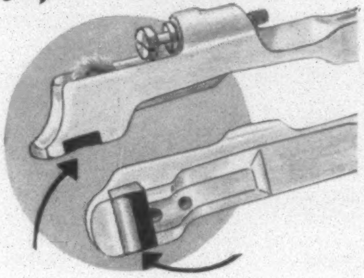
Superior Performance



The Dixon LUBRONZE Bearing is a new improvement in the Dixon Lubricating Saddle. It is a bronze insertion impregnated with graphite, oil and other materials, fixed in the saddle at the point where the latter bears on the front roll. Here, where friction causes the greatest wear, LUBRONZE Bearing provides a smooth surface and gives extra protection of reserve lubrication.

With its special reserve qualities, LUBRONZE will not eliminate the need for lubrication, but it takes over the oiling job when unavoidable delays occur. LUBRONZE IS AS GOOD AS AN EXTRA HAND IN THE SPINNING ROOM.

This bearing is furnished in our famous CWA No. 4 Jump Saddle (see below), ready for immediate shipment, but it can be applied to all DIXON front saddle bearings.

When ordering new Jump Saddles for weighting front and back rolls only, specify our CWA No. 4 with LUBRONZE Bearing. All Dixon Saddles are products of long experience and quality workmanship,—the best you can buy.

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GEORGE A. FIELD, Manager

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DEVELOPED IN DOLGE LABORATORIES

KADOL is *today's method* of cleaning various types of flooring because its concentrated, brilliant *liquid* form permits *pouring* to make an economical dilution of *only two ounces to the gallon of water*. Easy to handle — and it goes a long, *clean* way in keeping your floors immaculate.

KADOL is *neutral*—can be used safely on linoleum, cork, also wood mastic, tile and many other surfaces, and is recommended as a *general cleaner*. No rinsing is ordinarily required; when a KADOL-cleaned surface is dry-mopped, an attractive polish results.

KADOL has no druggy, clinging odor associated with usual cleaning compounds. Its fragrance is pleasant and unobtrusive.

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WESTPORT, CONNECTICUT

supplies and service to present users. Atlas is well known in the field as the originator of weathering and fading equipment, and for over 25 years has manufactured the Weather-Ometer, Fade-Ometer and Launder-Ometer. Atlas is now redesigning the Model X1A to incorporate the automatic cycling and other control features of the Atlas Twin-Arc Weather-Ometer but is retaining as a light source the well-known National Sunshine carbon arc. This redesigned weathering unit will be an addition to the regular Atlas line of Weather-Ometers, Fade-Ometers, and Launder-Ometers.

Bulletin Outlines Cochrane Condensate Return Systems

Cochrane Corp., Philadelphia, Pa., has announced publication of an expanded 20-page bulletin on high pressure condensate return systems. New technical material on turbulent vs. laminar steam flow and the effects of air and condensate films on heat exchange characteristics make the technical portions of this new book particularly useful to engineers responsible for the efficient transfer of steam heat in heating, cooking, drying and pressing operations.

Improved equipment for the positive removal and drainage of condensate is also described for the first time. To accomplish the return of condensate to even higher pressure boilers from presses, dryers and other steam heated process equipment Cochrane engineers have developed the new C.B.A. high pressure condensate return system. This new unit gives added capacity with lower horsepower motor ratings and can be used for return of condensate to higher pressure boilers. Similarly, condensate can be returned direct to boilers in the 100 to 150 psi range at higher pressure differentials than was formerly possible.

The closed circuit from the boiler, through the process equipment, and back to the boiler results in quicker and more uniform heating, hence increased production and improved quality. At the same time flash loss is eliminated providing one per cent fuel saving for each 11-degree temperature gain. Typical case histories are reported in detail. Write Cochrane Corp., 17th Street and Allegheny Avenue, Philadelphia 32, Pa., for a copy of Publ. 3250. In Canada address Canadian Allis-Chalmers, Ltd., 212 King Street West, Toronto, Ont.

Brown Instrument School Doubles Student Capacity

Student capacity, space, and equipment facilities at the Brown School of Instrumentation in Philadelphia has been doubled through the leasing of new and larger quarters consisting of a four-story building. The school, now in its 14th year, is conducted for training both customer and Brown Instrument Co. service and maintenance engineers. The new quarters will permit expansion of the school faculty under the direction of M. L. Ladden, according to L. M. Morley, vice-president of Minneapolis-Honeywell Regulator Co. and its Brown division. It will also permit, he added, a reduction in the large backlog of applications from Brown customers who wish to provide their instrument engineers with additional technical and practical knowledge of industrial instrument operation and maintenance.

The school will extend its courses in processing control and will add classes for the teaching of specialized subjects. Free tuition is provided for customer students, who come to the school from all corners of the world. The new school, at 5109 Germantown Avenue, is on the site where in 1688 the first recorded protest was heard in North America against human slavery. The first three floors of the school will include school offices, lecture halls, exhibit equipment work room, laboratories, demonstration panels, work rooms, etc. The fourth floor will be equipped with complete panel layouts of Brown instruments as applied to various process controls and with Minneapolis-Honeywell non-indicating or recording devices.

Sheffield's Micronaire Measures Fiber Fineness

The fineness of textile fibers (animal, vegetable and synthetic) can be accurately measured and classified by the Micronaire, a new product of the Sheffield Corp., Dayton, Ohio, in a fraction of the time formerly required, the company states. Two tests per sample can be made in two to three minutes—from 25 to 50 samples can be measured with the Micronaire in the same time that one sample is checked by laboratory methods and equipment. Repetitive accuracy is within 0.1 micrograms per inch on cotton, the most varying of textile fibers. Accuracy is even higher with other types of fibers.

The Micronaire utilizes the principle of forcing air through a plug of fibers and indicating the resistance to the air flow, thus indirectly measuring the degree of fiber fineness. Fine fiber stock offers more numerous air passages, but the average openings between the fibers are smaller. Therefore the resistance offered to the flow of air is greater for fine than for coarser fibered stock. Direct readings are made from a scale calibrated in units standard for the fiber being checked.

Both the Sheffield Micronaire and the measuring principle have been proved through commercial use, it is claimed. As now developed it is a standardized instrument with necessary adjustments and interchangeable accessories for measuring textile fibers on a commercial scale. Micronaires are in use in numerous textile plants. Others have been installed in colleges and universities having specialized courses. The cotton and wool sections of the Department of Agriculture at Washington are assisting in the development of measuring techniques and Micronaire scale calibrations for various fibers.

Folder Features Harwood Aprons, Bramwell Feeders

Geo. S. Harwood & Son, 50 Lagrange Street, Worcester, Mass., has issued a small folder outlining features of its Harwood aprons and Bramwell feeders. Harwood aprons, the folder reveals, are specifically designed and custom built to give the maximum possible top quality performance by Bramwell feeders. The combination insures vibrationless mechanical operation, an important factor in keeping maintenance costs down, and uniform production up.

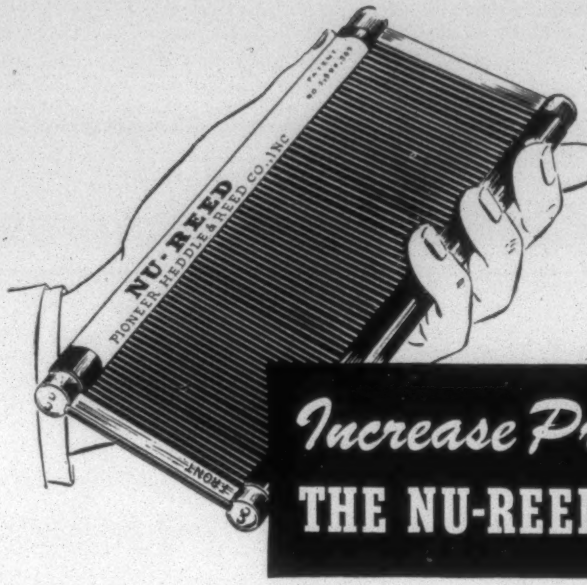
Anti-Static Agent Offered By American Cyanamid Co.

American Cyanamid Co. announced recently that its textile resin department product, Aerotex Softener H, is an effective and inexpensive anti-static agent for use on fabrics where nylon or Vinyon yarn, type N predominates. The use of Aerotex Softener H on these types of fibers will largely eliminate development of static in mill operation, the firm declares. The difficulty, due to static, frequently experienced by finishing plants in controlling fabrics of nylon and nylon blended with viscose rayon or acetate rayon, can now be virtually eliminated by use of Aerotex Softener H. It has also proved very effective in simplifying the handling of nylon yarn.

Static electricity causes many types of freak reactions during processing of certain yarns and fabrics—such as snarling, sticking together and jumping about. It reduces efficiency and tends to lower the quality of the goods. Women have long been annoyed by static which frequently causes dresses and slips to cling to each other and to the wearer. For this reason the elimination of static in garments made of Aerotex Softener H treated fabrics will be welcome news. The drape is also improved, and the dresses hang better. Aerotex Softener H was originally developed to impart unusual softness to fabrics.

American Wool Handbook Available To Industry

Textile Book Publishers, Inc., established in March, 1945, and successor to the American Handbook Co., announces that the second edition of the *American Wool Handbook* is now ready. The authors are Werner von Bergen, director of research of Forstmann Woolen Co. of Passaic, N. J., and Herbert R. Mauersberger, president of Textile Book Publishers, Inc., and technical editor of *Rayon Textile Monthly* for over 14 years. Both have taught textile courses in the extension division of Columbia University. The book consists of 24 large chapters in more than 1,000 pages and has been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thoroughly revised, brought up to date and a great deal of new material on modern wool processing methods and machinery has been added. Arthur Besse, president of the National Association of Wool Manufacturers, wrote the foreword. The book is published by Textile Book Publishers, Inc., 303 Fifth Avenue, New York 16, N. Y., and sells at $8 per copy.

Bachmann Uxbridge Firm Develops New Slasher

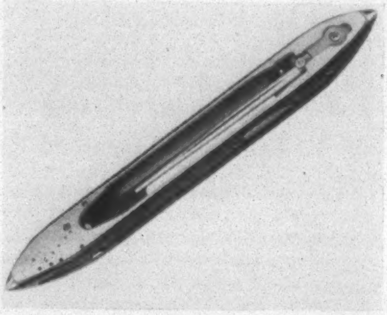
Bachmann Uxbridge Worsted Corp., Uxbridge, Mass., has developed and is now in production of a new streamlined slasher which, it claims, contains many new features and is superior to the old ones. An outstanding feature of the new slasher is the copyrighted Gentle-Air process in which the yarns are dried by the passage of heated air through and over the yarn sheet. Moisture laden air is carried off by one fan and fresh, clean air brought in by another fan.

Proctor & Schwartz Begins Distribution Of Folders

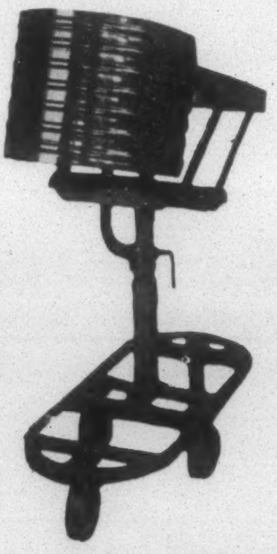
Proctor & Schwartz, Inc., Philadelphia, Pa., recently began distribution of *Proctor Progress,* a neat and informative folder to be published monthly and distributed to customers and friends of Proctor & Schwartz to acquaint them with how the firm is serving all industry. The first issue of the folder, distributed in January, tells how the demands for high output of top quality starch was met by the Proctor drying system.

P. C. Tension Shuttles Boosted By Steel Heddle

In keeping with their effort to perfect every individual product produced, the Southern Shuttles Division of Steel Heddle Mfg. Co., main shuttle plant at Greenville, S. C., and other plants at Paris, S. C., is featuring its heretofore unpublicized P. C. Tension Shuttles for plain or shuttle-changing box loom. The bobbin catch assembly is designed and built into the shuttle so as to not require the weakening of the shuttle by cutting the walls or bottom away, it is claimed. These parts are solidly and scientifically built into the shuttle. A patented rubber box protects the metal base of paper tubes.



Fibre lock nuts are used as standard construction on this shuttle and recessed head



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screws are furnished on request. The spindle, known as the R. B. Head, has a long bearing surfaces and is provided with levelling device. Hard chrome plate tension and pin are furnished when ordered, thereby eliminating yarn cutting. This shuttle can be supplied with Ste-Hide, the new phenolic cloth covering, or fibre or plain dogwood.

New Simplex Machine Is Latest Reiner Product

The new Reiner Simplex machine is the latest addition to the growing line of textile machinery produced by Robert Reiner, Inc., Weehawken, N. J. Designed by Reiner experts, the machine is precision built to provide knitting mills with the best equipment possible to keep step with the increasing uses of Simplex fabrics. General specifications of the machine, offered in 30 and 32 gauge (English) follow: height — six feet nine inches; length — 12 feet three inches; width—four feet six inches; weight —8,000 pounds; working (knitting) width — 84 inches; maximum warp flange diameter—21 inches; beam shafts—2¾-inch diameter (or 4½-inch diameter for sectional beams or for the application of beam flanges for full width beams).

U. S. Testing Co. Builds New Lubricity Tester

Developed by the Nopco Chemical Co., Inc., a new lubricity tester for the determination of friction qualities of yarn has been built by the United States Testing Co., Hoboken, N. J. The equipment utilized measures the speed of a rider down a known incline for a fixed distance. The test apparatus is applicable to filament yarns and threads.

The method of test very closely duplicates actual running conditions so that actual effects in relative use are reflected in results. The lubricity tester has been used in the evaluation of knitting lubricants on various yarns and in comparison of sewing threads. The lubricity tester may be used in determining the effect of mercerization on the smoothness of the yarn, relationship between co-efficient of friction and abrasion resistance in processing, and in other fields. It offers possibilities for testing of surgical sutures for smoothness, and for testing fishlines in the original state and after use.

Offer Checklist For Plant Health Programs

Pointing out that more than nine out of ten companies with health programs have experienced a decline in absenteeism, accident rates and illness since instituting their programs, the Labor Relations Institute, New York, has prepared a 25-point checklist of health program essentials for the guidance of its members. Some of the questions follow:

Have you established a plant dispensary equipped to give employees physical examinations and emergency care? Do foremen send all plant sickness and accident cases to the dispensary, no matter how slight? Is your safety equipment inspected regularly? Does your plant have a program for housekeeping to help maintain safe, healthful

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working conditions? Do your employee publication and bulletin boards feature articles on prevention of occupational diseases and other health topics? Is accident prevention stressed through supervisory meetings, plant posters and executive letters to employees? Do you co-operate with community accident and disease prevention campaigns? Are checks made on "accident prone" workers so they can be transferred to safer jobs?

"Rising prices have affected health programs as well as other aspects of the industrial scene," the institute reports. "However, recent figures show that a program can be established for less than $15 per worker per year, only a slight increase over the pre-war cost of $12.36. The $15 figure includes the cost of amortizing the initial investment over a ten-year period. This investment ranges from $550 to $3,500 for the average small plant, depending upon the number and size of the rooms used, the amount of equipment purchased and the salaries paid to plant health personnel. In most cases, the total cost to the company for the entire installation was less than the expense formerly borne by the same firm for industrial accidents alone."

Metallizing Gun Offers Many New Features

One of many new features of the new light-duty, low air L Gun just announced by Metallizing Engineering Co., Inc., Long Island City, N. Y., is its requirement of only ten cubic feet of air per minute for metallizing. This new gun also boasts of new turbine construction requiring only one-third the power, making a large compressor unnecessary, the company claims. The new nozzle construction assures lower cost per pound of metal sprayed because of the low consumption of acetylene and oxygen. Another feature, turbine control, requires only one adjustment for the entire range of metallizing wires. The L Gun weighs only four pounds and two ounces, considerably lighter than other metallizing guns.

These important Type L Gun features give you a metallizing gun that will spray all kinds of metals by hand or machine on all kinds of work at the lowest installation cost. An illustrated and comprehensive bulletin has been prepared, copies of which are available on request to Metallizing Engineering Co., Inc., 38-14 30th Street, Long Island City 1, N. Y. Ask for Bulletin 55. Also available upon request is Bulletin 57, describing features of the Metco Sprabond, which the firm describes as a metal which may be sprayed directly on to smooth, even highly polished steel and other metals without any surface preparation.

New Speed-Wrap Stresses Savings In Wrapping Time

A new portable device for heat-sealing packages hand-wrapped in cellophane has been developed by Charles F. Hubbs & Co., 389 Lafayette Street, New York City, designed to increase hand-wrapping speeds up to double and more on flats, rounds, tapers, rectangles, cylinders and many odd-shaped packages ranging from 1/16-inch to three inches and over in thickness. Marketed under the name of Speed-Wrap, the new sealer provides five hot-sealing surfaces for greater versatility over a wide range of cellophane-sealing applications, including end-seals, band seals, envelope wraps and special seals. In addition, the Speed-Wrap discourages needless waste of cellophane, as the correct size sheet will give greater wrapping speeds than a sheet larger than necessary.

The device can be used successfully to package sheets, towels, pillow cases, tablecloths, handkerchiefs, napkins and other items. The Speed-Wrap portable hot-sealer is a bench model measuring 16 by 21 inches, and operates on 110-125 V. AC-DC. Two independent rheostats afford steady flow of heat to all sealing surfaces, including the special removable adapters provided with each model to insure tight end-seals for different kinds of packages, including cartons and straight or tapered trays of varying widths and depths.

Improved Tachoscope Shown In Zernickow Co. Circular

O. Zernickow Co., 15 Park Row, New York 7, N. Y., producer of efficiently-increasing and labor-saving tools, recently has issued to the industry a circular describing its O-Z Improved Direct Reading Tachoscope and the O-Z Improved Tachoscope. The O-Z Improved Direct Reading Tachoscope is described as a chronometric tachometer which shows per minute speeds, r.p.m. and f.p.m., in three seconds (Type A) and six seconds (Type B). No stop watch is needed as timing is automatic, the circular reveals, and the instrument is accurate to within 0.5 per cent. The O-Z Improved Tachoscope is called a precision revolution counter synchronized with a high-grade Swiss stop watch. It will serve as speed indicator, calibration check for tachometers or stop watch. Trigger starting and stopping mechanism controls both counter and watch simultaneously, hence, errors in testing due to the human element, are eliminated.

G. E. Offers New Service To Individual Manufacturer

The General Electric Co., Bridgeport, Conn., has inaugurated a new service to supply electrical conduit assemblies made up to the specifications of individual equipment manufacturers. According to D. J. Murray, manager of the G. E. conduit products division, the service is designed to

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simplify the manufacturing problems of any company which determines, either during the engineering or production stage, that its product has electrical circuits requiring the protection of conduit.

Mr. Murray said that the service aims particularly to help manufacturers of such products as oil burners, water heaters, major appliances, textile machinery, machine tools, trailers and pumps. "By ordering a complete wiring assembly to fit his specific production problems, the manufacturer can not only eliminate or simplify the costly operations involved in cutting, threading and bending conduit, stripping and tinning wires and selecting and adding wiring devices, but also speed production, occupy less floor space and improve the quality of his product," he said. General Electric conduit assemblies are supplied with or without wire, in flexible or rigid conduit or EMT, and with practically any wiring device needed. They are sold through the company's franchised electrical wholesalers.

Monsanto Reduces Price Of Sted, Synthetic Detergent

A reduction in prices for Sted, synthetic detergent for textile scouring, washing and cleaning, was announced March 8 by Monsanto Chemical Co. at its Merrimac Division headquarters, Everett, Mass.

The following new price schedule applies to carload lots: F. O. B. Anniston, Ala., 12 cents per pound; F. O. B. Camden, N. J., 13¼ cents per pound; F. O. B. Everett, Mass., 13½ cents per pound. New prices for 100-pound bags LCL from each of these shipping points are one-half cent a pound more than the carload prices. These reductions will make possible savings up to 20 per cent on carload lots, the exact percentage depending on geographical location.

Sted is the new name for the product formerly known as Lucenol, which gained wide acceptance in the textile industry. Increased use and production of Monsanto's synthetic detergent and scouring agent have made possible the reduction, according to a statement by Dr. D. H. Powers, director of Monsanto's textile chemicals department.

Rohm & Haas Named Agent For Bocon Chemical Item

Appointment of Rohm & Haas Co. of Philadelphia as selling agent for Boconize, a durable new mothproofing compound for use in the textile industry, was announced March 3 by Ernest J. Conway, president of Bocon Chemical Corp., New York City. Rohm & Haas Co., manufacturer of Plexiglas and one of the country's leading producers of chemicals for the textile, leather and other industries, will handle sales of Boconize to textile mills in all the United States except New York and New England. That territory is being handled by the Perkins Soap Co., Springfield, Mass.

"We believe Boconize is an outstanding development in mothproofing," said a spokesman for Rohm & Haas. "The protection provided by a durable textile mothproofing agent which will withstand five launderings and 25 dry cleanings has not been capitalized upon in this country. In

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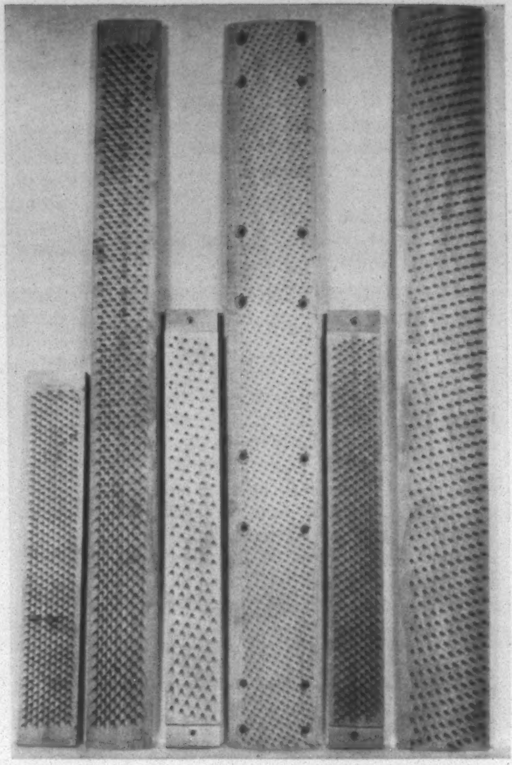

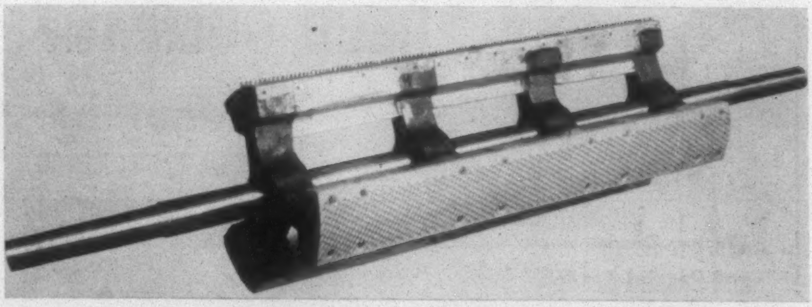

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Todd-Long Picker Apron Company
GASTONIA, NORTH CAROLINA
Office Phone 1568 Plant Phone 810
17 YEARS OF CONTINUOUS SERVICE

Europe where durability and economy must characterize all purchases, mothproofing of woolens is common practice. Americans are becoming more desirous of moth-protected fabrics and it is believed this will start a new buying trend. Textile manufacturers are aware ofthis and many are planning the application of Boconize to their products. Others will follow very shortly."

New Tank Design Features Hild Shower-Feed Machines

All models of Hild Shower-feed floor, rug and carpet machines are now being produced with a completely re-designed solution storage tank. The new tank adds to the efficiency of the machine, and makes it much more convenient to use, it is claimed. Since the weight of the tank and solution are now carried lower on the handle, the center of gravity is lowered . . . for better balance, easier control and greater scrubbing efficiency.

The large opening of the new tank permits rapid filling from a pail without risk of spilling. A removable perforated brass screen in the opening strains out foreign matter which might otherwise lodge in the valve or cocks. Removing this screen (by unscrewing the three brass screws) permits reaching down to the extreme bottom of the tank for easy cleaning. The cover of the opening is attached by a piano-type brass hinge which will not rust or stick. A large drain cock at the rear of the tank permits the entire contents to be drained in four minutes. Ample clearance is provided to set a three-gallon pail under the drain cock so that the operator need not be present while the tank is being emptied. Detailed information on the new models may be obtained from the Hild Floor Machine Co., 1313 W. Randolph Street, Chicago 7, Ill.

General Engineering Firm Organized In Charlotte

General Engineering & Research Corp., 220½ West Fourth Street, Charlotte, N. C., recently has been organized to serve a growing industrialized South. An official of the new firm states that it is able to take and make improvements on existing equipment, to design new equipment for specific jobs, to work on development and research products for equipment, jobs or attachments to do better work on existing machinery, and that it is equipped to follow through patent layouts and patent developments on either items or large pieces of equipment.

Officers of the firm, men of wide experience and proven ability in their field, are H. Froman, president; J. B. Goodgame, vice-president and chief engineer; V. A. Hanson, vice-president and research director; and S. T. Taylor, secretary-treasurer.

Du Pont Issues Bulletin On Nylon Warp Sizing

The nylon division of E. I. du Pont de Nemours & Co., Inc., recently issued a new bulletin on "Warp Sizing: Polymethacrylic Acid for Continuous Filaments" for inclusion in manufacturers' copies of the Nylon Technical Service Manual. The new bulletin replaces the present bulletin dated October, 1943, page 2.01 in the Weaving Broad section of the manual (section 5).

Two Carbowax Compouds In Full-Scale Production

Carbowax compound 4,000 and Carbowax compound 6,000, useful as lubricants for resin coatings and textile and laundry starch sizings and as anti-static agents for synthetic resins, are now being shipped in carload quantities from the Institute, W. Va., plant, according to an announcement by Carbide & Carbon Chemicals Corp. The two compounds are among the first products to reach full-scale commercial production from new facilities installed at Institute.

Textile Machinery Firm Organized In Charlotte

E. and L. Corp., Charlotte, N. C., has been chartered to buy and sell textile machinery. Authorized capital stock is $100,000, with Royce Edmondson and associates listed as subscribers to stock.

Dual Visibility Oiler Simplifies Lubrication

An automatic lubricating device, scientifically designed after years of practical

GREENSBORO LOOM REED COMPANY

Finest Quality Reeds for COTTON, WOOL, RAYON and SILK WEAVING

Warper Reeds and Special Reeds of all kinds

EXPANSION COMBS for Beamers, Warpers and Slashers

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What Do You Require In HARNESS STRAPPING

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Low stretch—Stretch of RUSCO Harness Straps is nearly negligible.

Tensile Strength—Strength of RUSCO Straps is unsurpassed.

Resistance to oil and moisture—RUSCO Straps are Neoprene Impregnated.

It Adds Up to Longer Wear with RUSCO

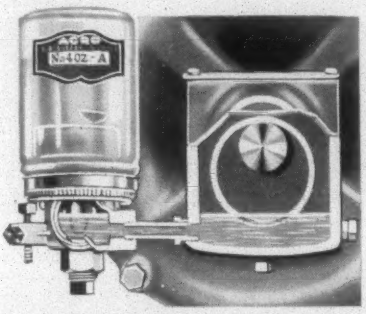
In addition to these qualities, RUSCO offers a flexible *Interwoven* construction — Definitely eliminating the ply separation which is a common cause of failure in the conventional ply type of Fabric Harness Strapping.

Your own test on a few looms will show how well RUSCO meets your Harness Strap requirements.

Cut and punched to individual specifications or furnished in Roll Form by

Carolina Belting Co., P. O. Box 1377—Greenville, S. C.—26 Augusta St.

study in constant-level lubrication, has been developed by engineers of Acro Metal Stamping Co., 1912 North Buffum Street, Milwaukee 12, Wis. Known as the Acro Lubricator, the unit simplifies the problem of motor bearing lubrication. It is a small, compact oiler that quickly attaches to electric motors, blowers, lineshafts, and similar mechanisms requiring a continuous supply of bearing oil. There are no floats, valves, or other moving parts in the lubricator, yet it always maintains the exact oil level necessary for correct lubrication. This simple, automatic, trouble-free feature practically eliminates machine failure due to faulty lubrication. To set the oil level desired on the motor bearing, Acro engineers devised a simple finger set-screw for quick and easy adjustment from the outside of the lubricator. Once set, no further adjustment ever is necessary.

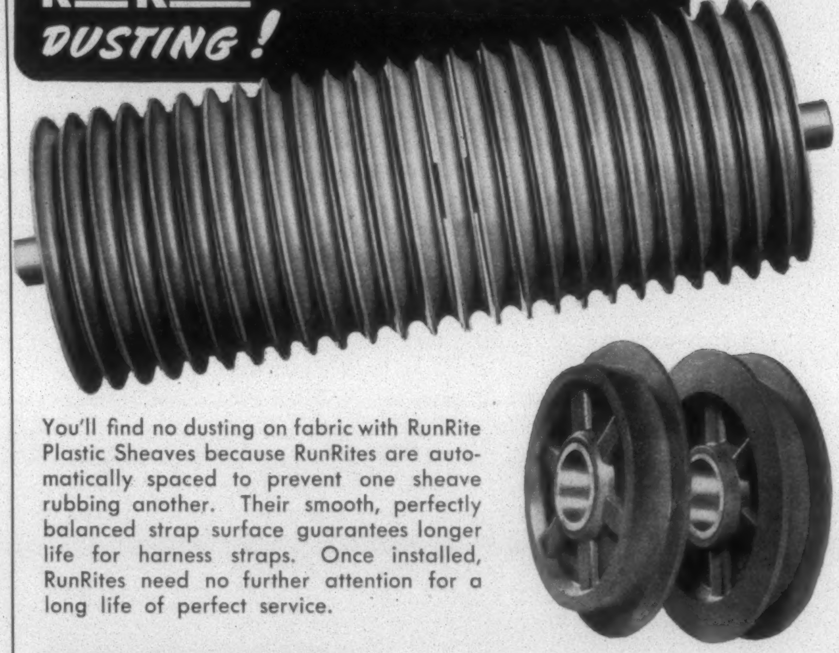


Outstanding feature of the lubricator, exclusively Acro, is its dual visibility. A sight glass on the side of the lubricator bowl shows the exact level of the oil that is being fed to the bearing. In addition, the total oil supply remaining in the glass reservoir can be seen from a distance and checked regularly in a minimum of time. Thus, the combination of constant level lubrication and dual visibility in the Acro Lubricator practically eliminates bearing failure due to faulty oiling and guesswork. The unit becomes completely automatic and frees maintenance men for major maintenance jobs.

Acro Lubricators will not drip, overflow, or splatter oil that causes hazardous conditions and short circuiting, the company claims, nor will the oil-reservoir jars vibrate loose. Where manual oiling wastes an average of 85 per cent of the oil, the Acro Lubricator utilizes every drop. Oil savings alone have been shown to be enough (50 to 95 per cent) to return the original low cost of these efficient units within a short time.

Another consideration followed by Acro engineers in designing the unit was the development of an oiler capable of long-term, attention-free lubrication. The Acro Lubricator, under actual test, has indicated that no refill is required for from six to 12 months, depending on the size used and the specific application. Acro Lubricators are ideal for the lubrication of oil ring, capillary, roller, or ball bearings. They fit either side or bottom-inlet applications and already are enthusiastically endorsed by prominent engineers and electricians.

RUNRITES ELIMINATE SHEAVE DUSTING!



You'll find no dusting on fabric with RunRite Plastic Sheaves because RunRites are automatically spaced to prevent one sheave rubbing another. Their smooth, perfectly balanced strap surface guarantees longer life for harness straps. Once installed, RunRites need no further attention for a long life of perfect service.

RUNRITE TRADE MARK Plastic Sheaves
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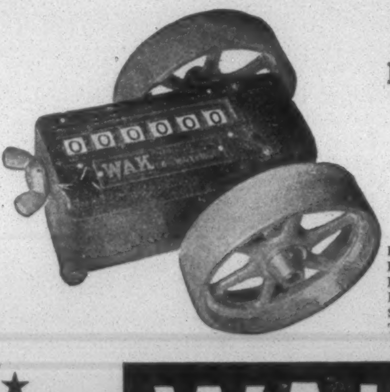
Special Counters



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*T. M. Reg.
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WAK INDUSTRIES
CHARLOTTE, N. C.

Rayon Deliveries Show 15 Per Cent Rise

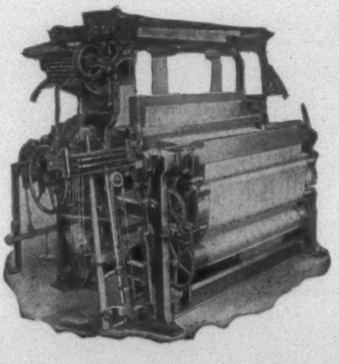
Domestic shipments of rayon in February totaled 80,600,000 pounds, while those in January amounted to 90,200,000 pounds, according to the March *Rayon Organon,* the statistical bulletin of the Textile Economics Bureau, Inc., New York City. Deliveries of rayon for the first two months of 1948 were 15 per cent above those in the corresponding months in 1947: February filament yarn deliveries comprised 60,700,000 pounds (41,100,000 pounds of viscose-cupra and 19,600,000 pounds acetate). January rayon filament yarn deliveries amounted to 67,800,000 pounds, of which 45,900,000 were viscose-cupra, and the balance acetate. Rayon stocks in the hands of producers at the end of February totaled 13,700,000 pounds, of which 8,500,000 pounds were filament yarn and 5,200,000 staple. February stocks in 1947 amounted to 9,800,000 pounds.

Reporting final import figures for 1947, the *Organon* shows that a total of 291,897 pounds of filament yarn were shipped to the United States and these goods were valued at $237,430. Staple imports amounted to the record total of 36,053,541 pounds valued at $13,017,824. The leading exporters of staple to the United States were Belgium, France, and Sweden, with shipments of 8,091,000 pounds, 7,502,000 pounds and 6,222,000 pounds, respectively. Other large shippers to this country were the Netherlands with 4,410,000 pounds and Finland with 2,793,000 pounds. Exports of rayon filament from the United States reached a new high in 1947. A total of 23,775,557 pounds were shipped out of the country. Exports of staple plus waste amounted to 4,862,842 pounds, also a new record which was made possible by the exceptionally large volume of 1,063,998 pounds shipped in December. Spun rayon yarn exports last year totaled 2,972,297 pounds.

A study made by the Textile Economics Bureau on the consumption of cellulose by the United States rayon producing industry reveals that 481,000 short tons were consumed in 1947. This represents a new high level and is 12 per cent above consumption in 1946. Of the total cellulose used, 401,000 tons were dissolving wood pulp and 80,000 tons refined cotton linters. During 1947, dissolving wood pulp strengthened its position as a source of cellulose for rayon manufacture, not only as the result of the industry's greater cellulose requirements but also by capturing a substantial share of the market formerly supplied by refined cotton linter pulp. Dissolving wood pulp consumption in 1947 was 24 per cent greater than in the preceding year; on the other hand, refined cotton linters consumption in 1947 showed a decline of 24 per cent. The rayon industry, incidentally, consumed 62 per cent of the entire available United States supply of dissolving and special chemical grades of wood pulp in 1947.

Consumption in 1947 of the four principal textile fibers (cotton, rayon, wool and silk) amounted to 6,399,100,000 pounds in the United States, only one per cent under 1946 and seven per cent below the 1942 wartime peak. Compared to the 1935-1939 period, for instance, it can readily be seen how large the current fiber consumption is. Last year the textile fiber total was 58 per cent above the average of the 1935-39 pre-war period, while consumption of the individual fibers showed the following percentage changes: rayon +195 per cent; raw wool +84 per cent; raw cotton +43 per cent; and raw silk —95 per cent. While the 1947 total four-fiber consumption was only slightly less than the previous year, rayon was the only fiber consumed in larger volume in 1947 than in 1946. Raw cotton consumption last year at 4,710,700,000 pounds was three per cent below 1946. Scoured raw wool consumed for apparel and carpets last year totaled 698,000,000 pounds, seven per cent less than in 1946; the wool consumption decline was due entirely to a 15 per cent reduction in the use of apparel wool, which more than offset a 35 per cent increase in the carpet wools.

Expansion of the use of rayon in the United States over the last decade is illustrated by the fact that while in 1937, for every one pound of rayon consumed, 12 pounds of raw cotton, 1¼ pounds of raw scoured wool, and 0.2 pounds of silk were consumed, at present these figures are changed to 4.8 pounds of raw cotton and 0.7 pounds of raw wool consumed for each pound of rayon; silk use in comparison to rayon is nominal. Rayon per capita consumption in the last ten years has been one of steady increase, the *Organon*



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All Purpose Textile Cleaner **and degreaser. Non-inflammable, Non-toxic,** will not **injure the skin.** Replaces Varsol, Kerosene, and other hazardous solvents. **Will Remove oil spots from any fabric which water will not harm.**

INDUSTRIAL COATINGS

ADHESIVES

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goes on to point out. In the 1936-40 period, per capita use amounted to three pounds. In 1946, it averaged six pounds and in 1947 there was a per capita consumption of 6.3 pounds of rayon.

Domestic Raw Wool Production Declining

The American Wool Council, in its annual report released last month, warned that the United States is becoming a "have not" nation, relying upon foreign sources for from 70 to 80 per cent of its raw wool requirements. The report revealed that in the past five years domestic wool production in this country has declined from 461 million pounds to about 300 million.

According to preliminary figures released by the Bureau of the Census, domestic wool consumption in 1947 decreased by 40,000,000 pounds from 1946. Sheep wool consumed totaled 698,000,000 pounds (scoured basis) last year, compared with 738,000,000 pounds in 1946 for a five per cent drop. Apparel class wools consumed in 1947 showed a decline of 84,000,000 pounds less than 1946, but consumption of carpet class, duty free, wools increased more than 44,000,000 pounds in the same period. Foreign apparel wools spun on the woolen system decreased 39 per cent; on the worsted system the drop was 19 per cent.

A total of 789,000,000 pounds of yarn was spun on the woolen and worsted systems during 1947 against 919,000,000 pounds spun in 1946, the bureau reported. It was a 14 per cent drop. Production averaged 14,900,000 pounds a week in the 53 weeks of 1947 and 17,700,000 in the 52 weeks of 1946, a decrease of 2,800,000 pounds a week. The drop came entirely in production of "other than carpet yarns," the 627,400,000 pounds total falling 21 per cent below that for the previous year, which was 794,000,000 pounds.

An average of 3,500,000 woolen and worsted spindles were in place during 1947. Of this number 3,300,000 were active at some time during the year and were operated at an average of 207,000,000 hours a week. This was about nine per cent less than the weekly average of 227,000,000 hours operated in 1946.

Predicts Construction Of Rayon Plant

Henry Von Kohorn, vice-president of Oscar Kohorn & Co., declared recently that if American textile manufacturers have their say, at least one new viscose filament rayon and rayon staple plant will be constructed this year. "Such a plant will not only serve a real need," he said, "it will be the only new viscose rayon plant for textile uses constructed during the past nine years. Two plants under construction at present by American Enka Corp. and Celanese Corp. will produce tire cord and acetate yarns, respectively," he added. "They will not help relieve the shortage of viscose textile yarn."

After citing the problems of the individual mill, Mr. Kohorn explained: "Not knowing how to approach the problem of creating additional rayon production, most mills are resigned to the fact that they cannot obtain more yarn until rayon producers will provide it. Our company has lately endeavored to place the facts before the American textile industry, pointing out that an organization such as ours, with a 35-year record of building and operating rayon plants, is perfectly capable of creating such additional pro-

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★ PENETRATES THOROUGHLY
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★ ALWAYS UNIFORM
★ BOILS THIN

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THE KEEVER STARCH COMPANY **Columbus 15, Ohio**

duction facilities for filament rayon and staple fiber, as can be financed by one mill or by a group of converters, spinners, weavers and knitters. As our negotiations with weavers, knitters, converters and spinners continue, we expect to meet with a certain amount of opposition, but these measures will not prevent the establishment of one or more rayon plants in the United States during this year. Those rayon consumers, who have the foresight to make such an investment will have one that is sound in itself and will create a badly needed source of supply of rayon for the investor."

1947 Cotton Goods Output Up 7 Per Cent

A total of 9,791,000,000 yards of cotton broad woven goods was produced in the United States during 1947, according to preliminary figures released by the Bureau of the Census. This was 647 million yards, or seven per cent, more than the 1946 production and was the highest annual production since 1943. The 575 million yards of cotton, rayon and nylon tire cord and fabrics produced in 1947 was ten per cent greater than in 1946. A total of 2,559,000,000 yards of cotton broad woven goods was produced in the fourth quarter of 1947, an increase of eight per cent above the corresponding period of 1946 and 11 per cent above the third quarter of 1947. The increases shown are partially due to the fact that the fourth quarter of 1947 data are for a 14-week period instead of the customary 13-week period.

There were 394,000 looms in place on Jan. 3, 1948, of which 382,000 were active on the first shift; 364,000 on the second; and 192,000 on the third. Loom operation totaled 533 million loom hours, which was 12 per cent above the loom operation in the third quarter of 1947. The total amount of yarn consumed in the production shown below was 944 million pounds, of which 871 million pounds were cotton, 62 million pounds rayon, and 11 million pounds other than cotton or rayon yarns.

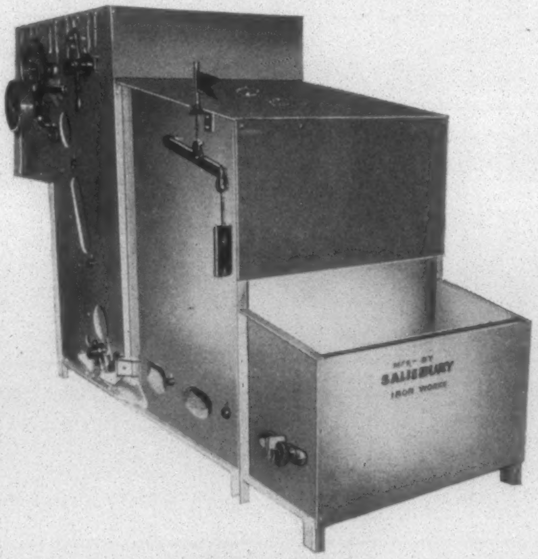
SUMMARY OF PRODUCTION BY CLASS OF FABRIC

Millions of Linear Yards

	Jan.-Dec., 1947	Jan.-Dec., 1946	Fourth Quarter, 1947 (Preliminary)	Third Quarter, 1947 (Revised)	Fourth Quarter, 1946 (Revised)
Total cotton broad-woven goods (except tire fabrics)	9,791	9,144	2,559	2,297	2,359
Cotton duck	213	241	46	41	63
Narrow sheeting and allied coarse and medium yarn fabrics	2,351	2,205	604	561	563
Print cloth yarn	3,238	2,885	854	77	736
Colored yarn cotton goods and related fabrics	723	616	191	174	162
Wide cotton fabrics	647	563	169	156	149
Fine cotton goods	1,316	1,275	356	292	334
Napped fabrics	508	456	135	122	121
Towels, towelings and wash cloths	409	415	107	89	108
Specialties and all other fabrics	386	488	97	85	123
Millions of Pounds					
Total tire cord and fabrics	575	524	146	132	143
Cotton tire cord and fabrics	345	311	84	74	86
Rayon and nqlon tire cord and fabrics	230	213	62	58	57

Government May Act In Synthetic Labeling

The controversy concerning definitions and usage of the term "rayon" saw a new development recently in Washington. It is now believed that legislation to write synthetic fabric labeling requirements into the Wool Products Labeling Act, or as a separate law, is in the making. A spokes-



MODEL S BF-1
ALSO MODEL F-5

Loom Beams

SALISBURY ENCLOSED BLENDING FEEDER

Model S BF-1 Salisbury Enclosed Cotton Blendng Feeder is used for the processing of cotton, wool, and synthetics.

This machine has been designed by textile engineers long experienced in the development and operation of machinery for the textile industry. Salisbury Blending Feeders are precision manufactured of the finest quality materials and workmanship to render long and dependable service with a minimum of maintenance and operational cost.

GENERAL SPECIFICATIONS

The Salisbury Enclosed Blending Feeder has a heavy fabricated steel frame which makes it a rugged, durable, and trouble free unit. All gears and chains are covered with guards for safety.

Oilite bronze self-aligning bearings are used throughout, eliminating oil leakage and assuring clean fibres.

Provisions are made for the installation of automatic sprinkler head and vacuum lines. All usable waste fibres may be reclaimed from waste container.

Salisbury Blending Feeders are designed to allow installation of kick-off roll or combing attachment.

The machine may be used in a blending line or in combination with a picker.

This model is provided with ample storage space. This facilitates better blending of various fibres and requires less attention from the operator.

Model S BF-1 as shown is equipped with a lower or front apron which extends outside the storage chamber of the machine and has a small bin into which the raw material is placed by the operator. It is then carried into the storage chamber on the conveyor apron. This model also has a combing attachment as standard equipment.

This machine is manufactured of the finest material and workmanship and has proven its worth by satisfactory, trouble free operation.

SALISBURY IRON WORKS, INC.
SALISBURY, N. C.

man for Sen. Theodore F. Green (D., R. I.) has confirmed trade reports that the Rhode Island legislator was drawing up a measure to put into the law what the Federal Trade Commission has been trying to do, administratively, in regard to clear definitions of the term "rayon." However, he refused to give details of such legislation on the grounds that it was still in its early stages. The senator, it is understood, has not yet decided whether to draft an amendment to the Wool Labeling Act, or propose a bill creating a separate rayon labeling act.

Florida School Starts Fabric Institute

The Jacksonville (Fla.) School of Technology has inaugurated a fabric institute to better acquaint persons in related businesses with fabric products. The course, which got underway Feb. 23, consists of ten lectures and demonstrations by representatives of fabric manufacturers and pattern specialists. In addition to lectures on the history and care of fabrics, discussions covering the rules of fashion, figure analysis and dressmaking were to be included.

Woven Wool Cloth Output Declined In '47

Preliminary figures released by the Bureau of the Census reveal that woolen and worsted woven fabric (except felt) production in 1947 totaled 501 million linear yards, 17 per cent below the 604 million linear yards produced in 1946. Production for the fourth quarter of 1947 totaled 130 million linear yards, an increase of 15 per cent above the quantity produced in the previous quarter. At the end of 1947, the bureau reports, 38,572 woolen and worsted looms (exclusive of carpet and rug looms) were in place, and 34,774 were in operation at some time during the year. These looms were operated at an average of 2,400,000 hours per week—1,100,000 on the first shift, 1,000,000 on the second, and 300,000 on the third.

Production in the United States of woolen and worsted woven fabrics in millions of linear yards was as follows: (In the following table, Column 1 gives the output in the 53 weeks of January, 1947; Column 2 presents the revised figure for the 52 weeks of December, 1946; Column 3 gives the production in the 14-week period of October-

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Designed for long life, minimum stretch and greater flexibility. Specially constructed of layers of cotton duck impregnated with rubber in thicknesses as required. In finished strapping or roll lengths.

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No stretch. No slip. Uniform operation plus long life insure continuous, more efficient production.

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Absorb impact shock and vibration. Reduce building and machinery maintenance. Scientifically constructed of specially woven cotton duck impregnated with rubber. By using Fabreeka cement lag screws or bolts can be eliminated.

FABCO-COMPENSATED BELTS FOR RAYON TWISTERS AND SPINNERS
Specially designed for minimum stretch, smoothness of operation and long life. Can be furnished in wrapped endless construction or with stepped splices, or in roll lengths.

FABREEKA CONVEYOR BELTS AND APRONS
For all conveyor operations where cleanliness, freedom from stretch, resistance to moisture, accuracy of tracking and uniformity of operation plus long life are desired.

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December, 1947, and Column 4 refers to the revised figure for the 13-week period of July-September, 1947.)

	Col. 1	Col. 2	Col. 3	Col. 4
Woven fabric (except felt)	501.4	603.7	130.0	113.5
Apparel	437.0	524.3	114.6	99.1
Government orders	11.7	1.0	5.7	3.5
Other than government orders	425.3	523.3	108.9	95.6
Men's, boys', women's and children's wear	389.9	481.8	46.4	40.5
All other unclassified	35.4	41.5	9.8	8.6
Non-apparel	64.4	79.4	15.4	14.4
Blankets (25 per cent or more wool)	31.9	48.4	6.8	6.5
All other	32.5	31.0	8.6	7.9

Survey Shows Consumer Interest In Fabrics

Today's customers are showing a definite interest in the performance and care of the fabrics they buy, it was disclosed March 5 when New York University School of Retailing's Bureau of Retail Research released the results of a point of sale survey entitled "What the Consumers Want to Know About Fabrics." The survey, conducted for the American Viscose Corp. and made under the driection of Mrs. Karen R. Gillespie, assistant professor of retailing, and Dr. Lawrence C. Lockley, director of research at the university's school of retailing, covered 823 customer contacts. While this was not a very large sampling, according to Dr. Lockley, it was considered sufficient to provide data indicative of consumer education needs.

Of the customers questioned, 57.5 per cent had specific comments or asked questions about fabrics indicating that a large majority of retail customers do want to know certain facts about fabrics. In order to determine what facts were needed and how they were related to specific fabrics and merchandise the study was tabulated in three ways. First, by questions asked, regardless of type of merchandise of fabric. Second, by the frequency of questions in relation to the different fabric types, and third, by the frequency of questions in relation to specific merchandise. The first tabulation of questions asked about fabrics in order of frequency showed:

	No. of Questions	Approx. Pct.
Performance (how it will wear)	184	35
Care of fabric (wash, dry-clean, iron)	99	19
Fiber content	99	19
Cost and value	62	11.5
Appropriateness of fabric to use and occasion	43	8.5
Fashion	9	1.5
Brand	8	1.5
Miscellaneous questions asked	21	4
Total	525	100%

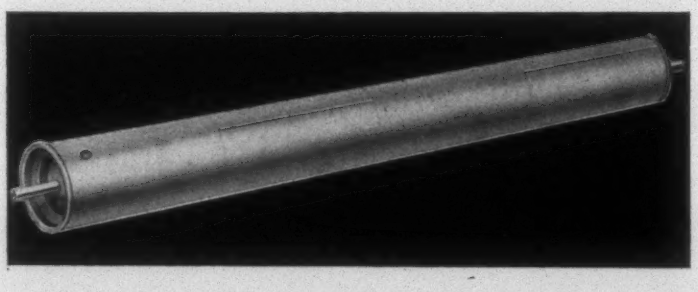
An interesting note in the above tabulation, the survey found, was the low percentage of comments on fashion in connection with fabrics. One explanation, the report stated, might be that such a thorough job is being done by retailers on fashion that customers need no further information. In tabulating the percentage of questions asked by types of fabrics, the study revealed:

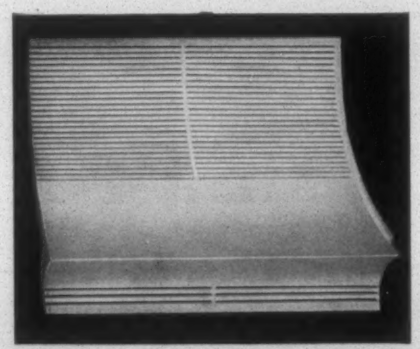
	Wool	Rayon*	Cotton†	Misc.: Straw, etc.	Total
Total number questioned	194	221	76	34	525
a. Performance	27%	38%	48%	35%	
b. Care	5	31	21	15	
c. Fiber content	33	10	9	18	
d. Cost or value	17	6	13	17	
e. Suitability	13	4	5	12	
f. Fashion	1	3	0	0	
g. Brand	1	2	3	0	
h. Miscellaneous	3	6	1	3	
	100%	100%	100%	100%	

*Also includes silk and nylon. †Also includes linen.

An analysis of the above figures showed several interesting relationships. For example, in buying cotton fabrics the consumer showed less interest in care than she did in buying rayon fabrics. An explanation of this, the report stated, may be the customers' long familiarity with cotton fabrics and

A PART ON HAND
IS WORTH TWO
IN THE FACTORY





It's just "good old horse sense" to stock parts rather than lose valuable time, often days, waiting for replacements or repairs. If you're low on

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PICKER SCREENS
BRASS TWISTER TROUGHS
COMBER TINS AND CAGES
ASPIRATORS AND DAMPERS

place your order at once. ALL Jenkins' products represent the highest quality materials and precision workmanship to help you keep maintenance costs at a minimum.

JENKINS METAL SHOPS, Inc.
GASTONIA, NORTH CAROLINA

handling methods as compared with treatment of the new varieties of rayon fabrics that are constantly being made available and requiring different handling.

The third tabulation according to frequency of questions asked by type of merchandise disclosed:

	Yard Goods	Blouses	Lingerie
Number of customers recorded*	104	105	53
Percentage of customers asking questions	74%	66%	48%
Types of Questions:			
a. Performance	30%	29%	39%
b. Care	18	46	39
c. Fiber content	9	16	7
d. Cost or value	10	1	0
e. Suitability	28	0	0
f. Fashion	2	6	3
g. Brand	1	0	9
h. Miscellaneous	2	2	3

---

*Of the 468 customers asking questions, 262 did so in these departments. The others were so widely scattered among the various departments (i.e., hosiery, dresses, suits, coats, sportswear, accessories and home furnishings) that the tabulation would not have been significant.

As a result of the survey, it was found that the customer wants to know specific facts about a fabric. Will it shrink? If so, how much? She also wants to know how to care for the fabrics she buys. Among the various fibers, the customer has requested more information in the rayon category than in any other indicating that there is where the competitive-minded retailer should put special emphasis. Finally, the report reveals, if an in-store sales training program on fabrics is planned, it would seem important to begin with the yard goods department, with blouse and lingeries departments as second and third choices.

New Tariff Rates Pose Problem For Future

The Cotton-Textile Institute has just completed an analysis of the changes that have taken place in the tariff rates on cotton goods entering the United States since 1934, which points out that while the new rates do not constitute a serious threat for the industry they do pose a problem for the future. The study points out that reductions prior to 1948 were primarily in the high count yarn fabrics but that the 1948 reductions cover practically every product in the textile schedule, including those in the medium count range. Specialties, such as ladder tape, fabrics woven with swivel attachments, etc., have been severely cut, it is explained, in some cases by as much as 75 per cent below the 1930 rate.

The analysis goes on to state, "The cotton textile industry of the United States, with more than 500,000 workers and 23 million spindles, was a child of the protective tariff. Without the tariff and the stimulus given by the War of 1812, the new industry would have found the going very rough and might not have survived the determined efforts of the foreign competitors to recover their place in the

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*Factory †Repair Shop ‡Distributing Point

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American market. In the 114 years that separate the imposition of duties in 1816 and the Tariff Act of 1930, many changes were made in the tariff structure of the United States, and the duties on cotton textiles were increased and lowered with the trend of the times.

COMPUTED DUTY UNDER TARIFF ACTS, 1890-1930

Tariff Act	Ad Valorem Equivalent Per Cent	Specific Equivalent Per Yard
1890	47.3	$0.061
1894	41.4	.049
1897	39.5	.059
1909	42.3	.068
1913	21.6	.059
1922	29.0	.068
1930	35.7	.055

"The trade agreements negotiated before the war did not have an opportunity to attain their full objectives. The agreement negotiated with Czechoslovakia was suspended when that country was occupied by the Germans in April, 1939. The agreement with the United Kingdom, which became effective on Jan. 1, 1939, was followed within nine months by the outbreak of the war. During the entire war period cotton textile imports were negligible and tariff protection became temporarily unimportant. In the 2½ years that have passed since V-E Day, neither the United Kingdom nor the countries of continental Europe have been able to rebuild their cotton textile trade to the 1939 level. For the immediate future, the new rates do not constitute a serious threat to the cotton textiles of this country.

"Beyond the immediate future, the prospect is quite different. Predictions as to the ultimate impact both in time and in degree are complicated by such factors as the rate of recovery of foreign cotton textile mills, especially the rehabilitation of the Japanese industry, comparative productive efficiency, labor costs, foreign exchange rates, the behavior of textile prices and our domestic raw cotton policy."

F. T. C. Begins Cotton, Loom Industry Probe

Spokesmen for the Federal Trade Commission disclosed recently that the commission has undertaken an industry-wide investigation of trade practices in the cotton textile and textile loom industries, but declined to discuss its scope. Sales practices of the cotton textile industry also are under investigation in an effort to determine if numerous reports of unfair trade practices are accurate. The loom manufacturers are being asked to reveal the manner in which their products are made available to the trade.

Upon completion of the inquiry and if it is found that individual practices were restricted to only a few items, it is believed that the F. T. C. would crack down by issuing individual complaints. However, should the commission find the practice general, it could choose to call the entire industry together in an effort to ban the practice by voluntarily accepted rules.

Change Proposed In Design Bill

It was reported March 14 that the House Judiciary Subcommittee studying legislation to protect textile fabric designs by copyright is considering proposed amendments for excluding standard woolen designs from the bill's provisions. The amendment, proposed by Representative Earl R. Lewis of Pennsylvania, would exclude from the act's application those designs used for years in woolen and worsted fabrics, such as suitings and automobile upholstery. Com-

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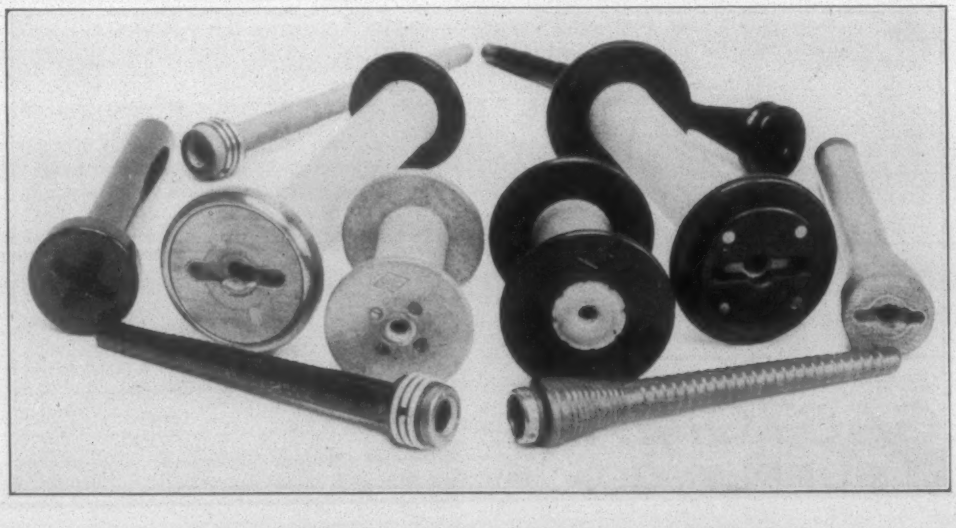

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mittee proponents of the measure are of the opinion that the bill would be favorably reported by the sub-committee, and eventually by the full committee, and that the planned amendments also would be adopted.

Rayon Weaving In 1947 Up 11 Per Cent

According to the Bureau of the Census, a total of 1,902 million yards of rayon broad woven goods was produced in 1947. This is 189 million yards, or 11 per cent, greater than in 1946 and is the highest annual production shown since this series of reports was originated in 1943. These statistics, which are preliminary, are based on a quarterly survey conducted by the bureau. Final figures will be published as part of the Census of Manufacturers for 1947, which is now being taken.

The total of 517 million yards of rayon broad woven goods produced in the fourth quarter, 1947, was 21 per cent more than during the corresponding period a year ago and 14 per cent above the third quarter, 1947. There were 106,000 looms in place Jan. 3, 1948, of which 101,000 were active on the first shift, 94,000 on the second shift, and 66,000 on the third shift. Loom operation totaled 150 million hours in the fourth quarter, 1947, which is 16 per cent above the previous quarter.

COMPARATIVE SUMMARY OF PRODUCTION BY CLASS OF FABRICS

(In millions of linear yards)

Type of Goods	Jan.-Dec., 1947	Jan.-Dec., 1946	Fourth Quarter, 1947 *	Third Quarter 1947—†	Fourth Quarter, 1946—†
Rayon broad woven fabrics, total	1,902	1,713	517	455	428
100 per cent filament rayon fabrics	1,210	1,049	328	294	261
100 per cent spun rayon fabrics	294	191	95	78	45
Combination filament and spun rayon fabrics	182	172	46	40	41
Pile, upholstery, drapery and tie fabrics (51 per cent or more rayon by weight)	46	47	12	11	14
All other rayon mixtures (51 per cent or more rayon by weight)	170	254	36	32	67
Silk, nylon, glass and other fabrics (contains mixtures with less than 51 per cent rayon)	58	63	14	12	21

*Preliminary. †Revised.

Laundryowners Asked To Protect Fabrics

New fabrics, reaching the market in increasing numbers, present new business opportunities for laundries, Dr. D. H. Powers, director, textile chemicals department, Monsanto Chemical Co., told members of the Massachusetts Laundryowners Association meeting in Cambridge March 5. Some of these new fabrics, he continued, have been treated for

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CI-41X Eye, reverse wind

The new CI-41 shuttle eye, with the inner hook and the outside lock, marks another outstanding Watson-Williams shuttle improvement. Already a score of cotton mills are acknowledging the quick threading qualities of this new eye, and the surety with which the outside lock keeps the thread constantly in place. Ask your Watson-Williams representative to show you the new CI-41 eye.

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shrinkage control, wrinkle-resistance and stabilization. They will wash excellently if care is used in their processing. The laundries should be able to wash them far better than they can be handled in home washing machines which have high-speed agitation and relatively high temperature.

Typical of these newly developed fabrics, Dr. Powers explained, are "washable woolens," that is, those that can be washed with reasonable care. No wool, treated or untreated, can withstand excessive chlorine, excessive caustic or severe mechanical agitation. Soft woolens have always felted badly and previously they could not be safely washed. The softer, more delicate flannels must be handled carefully because they are felted by the severe mechanical action of a high-sped rotary washer. Some untreated worsteds are already washable if extreme care is observed in the laundry operations, but new treatments with Resloom decrease the tendency to shrink as much as tenfold. A fine worsted, treated with Resloom, shrank only one to two per cent in more than an hour of continued washing in a rotary machine.

The various processes for shrinkage control vary in effectiveness, he told the group. There are some treated fabrics which provide but slight improvement in washability over the untreated, while others are washable to a much greater degree. During this period of transition in the development of washable wools, laundries must design their processing to protect the least washable of these fabrics. If the laundries will co-operate by avoiding bleaches and excessive mechanical handling, by using neutral soaps and keeping washing temperatures down to 100-120° F., they can take over the housewife's laundrying of washable woolens.

The other new fabrics, synthetics and blends, with their complexity as well as the diversity of their finishes will present some difficulties for the laundryman, Dr. Powers remarked. The great majority of the rayons and blends can be washed satisfactorily but care must be exercised. Chemical and resin finishes have improved their stability and resistance to repeated washing without shrinkage or stretching, but the laundry methods must be careful methods. Bleaches severely damage nylon fabrics as well as the acetate or wool used in the blends. More and more the laundryowner today must protect the fabric by using milder chemicals under milder conditions and remove soil and stain with more efficient detergents rather than with strong, harsh, powerful chemicals.

Washable Woolens Promise Expanding Market

According to E. Dean Walen, vice-president of Pacific Mills, continued progress in the technique of producing washable woolens and their increasing acceptance by the public promise to open up future new and expanding markets for wool textiles and a wide variety of wool apparel items. Mr. Walen's remarks were prompted after reviewing results of the introduction and sale of Pacifixed washable wool shirts for men.

Weigh Authority To Act On Mothproofing

It is reported that the Federal Trade Commission would like to call an industry-wide conference of firms producing mothproofing compounds, with the objective of promulgating trade practice rules regulating advertising and labeling.

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The project will remain in the "cooler," however, until F. T. C. is able to measure the effect and efficacy of the new Economic Poisons Act, passed by Congress and signed by President Truman last year. This statute required registration with the Agriculture Department of all so-called economic poisons before they are sold and injected into the stream of interstate commerce.

The project must remain indefinite, also, until F. T. C. is sure it has the right to go ahead with convening a trade practice parley for mothproofing producers, since the Agriculture Department's production and marketing administration apparently has jurisdiction over that field. Registration deadline for filing under the Economic Poisons Act is June 25, and it will take some time after that for F. T. C. to determine whether it still has jurisdiction and can proceed to begin formulating rules to regulate representations made for mothproofing compounds.

International Standards Group To Meet

The committee on textiles of the International Organization for Standardization will meet June 7-12 at Buxton, England, and at a recent meeting in New York City national organizations concerned with the manufacture, testing, processing and distribution of textile materials requested the American Standards Association to arrange for representation at the event. Because of the large number of textile test methods developed in the United States and the executive laboratory and research facilities in this country, the American delegation will be instructed to ask that the secretariat for the international work on textile test methods be assigned to the United States. It also will ask for the secretariat definition of rayon.

Two A. A. T. C. C. Units To Meet In April

The Piedmont and South Central Sections of the American Association of Textile Chemists & Colorists have meetings scheduled April 3 and 10, respectively; the Southeastern Section met March 13 and its next meeting is scheduled July 24. A resume of activities at the meetings, and news from the national organization, follows.

Piedmont Section—Will hold its spring meeting April 3 at the Robert E. Lee Hotel in Winston-Salem, N. C. This meeting will feature two technical sessions, one on hosiery and the other on cotton finishing, beginning at 3 p. m. Speakers to be heard, and their subjects are: J. C. Whitt, Century Hosiery Mills, Burlington, N. C., "Dyeing Vat

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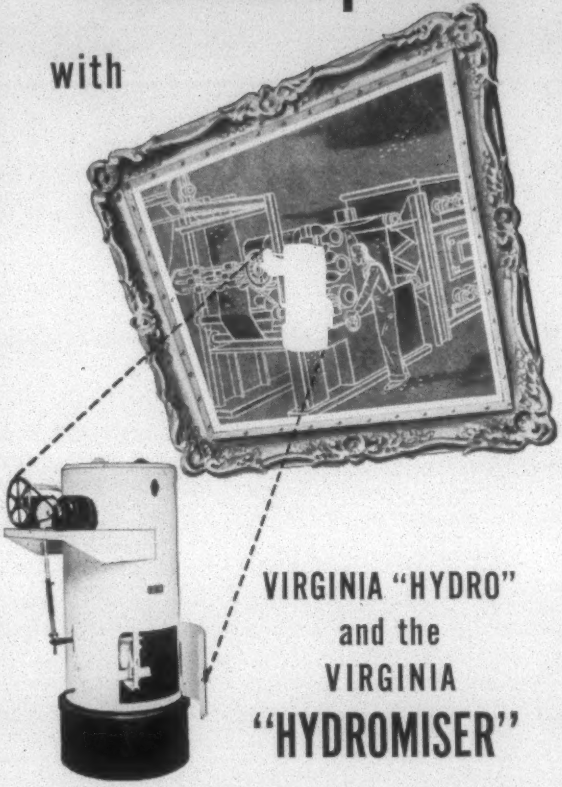

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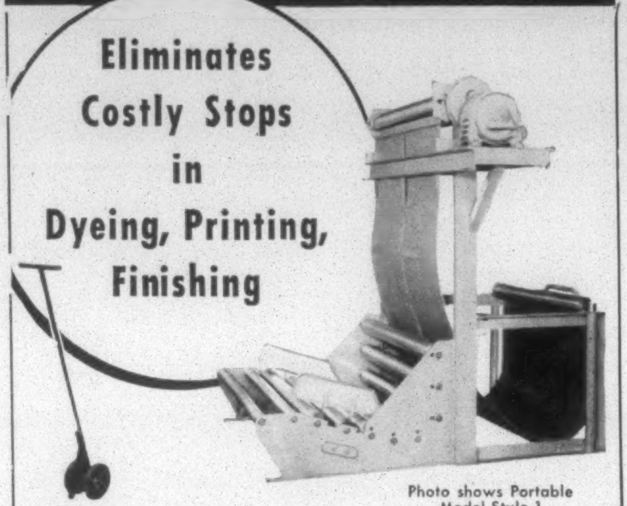

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The Mount Hope Continuous Roll Feed consists of a cradle, with ball bearing rolls, in which the new roll is held in place by adjustable selvage locators, motor driven ball bearing nip rolls and a scray. A center bar let-off with brake may be substituted for the cradle, if desired.

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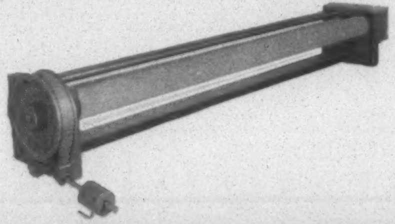

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Colors on Men's Half Hose;" Rufus K. Smith, Owen-Osborne Hosiery Mills, Gainesville, Ga., "Nylon Hosiery Preparation and Dyeing;" R. M. Fischer, manager of technical service, Textile Resin Department, American Cyanamid Corp., "Resins Improve Good Fabrics;" and Ray Pingree, Warwick Chemical Co., West Warwick, R. I., "Waterproofing Compounds." The hosiery session will be under the direction of Robert H. Smith, High Point, N. C.) Chemical Mfg. Co., and P. E. Smith, Riegel Textile Corp., Ware Shoals, S. C., will be in charge of the cotton finishing session. A golf tournament for members will be held in the morning and a banquet in the evening at 7 p. m. Charles B. Ordway is chairman for the meeting.

South Central Section—Scheduled to meet April 10 at the Patten Hotel, Chattanooga, Tenn. Norman E. Barnes of the general engineering and consulting division of General Electric Co., Schenectady, N. Y., and Fred C. Schlemmer, manager of Peerless Woolen Mills, Rossville, Ga., will be principal speakers at the meeting. Mr. Barnes will address a technical session at 5 p. m. on "ABC of Color Spectrophotometry," and Mr. Schlemmer will speak at the dinner meeting at 7:30 p. m. A third speaker, Prof. Stuart Purser, will consider "The Artist's Viewpoint of Color and Design in Textiles."

Southeastern Section: Met March 13 at LaGrange, Ga., with Dr. Harold Stiegler, director of research for the national organization, as the principal speaker. Dr. Stiegler used as his subject, "Ideas Won't Work—Unless You Do." Dr. Stiegler stated that the present research interests of the association cover the entire field of wet processing of textiles, of which there are two distinct divisions: test methods, procedures and instruments; and investigations in the processing of textiles involving the use of chemicals, dyes, finishes, etc. Both, he pointed out, challenge the ingenuity, ability and interest of all research-minded individuals and groups. Other meetings of this section are scheduled July 24 at Atlanta, Sept. 25 at Columbus, Ga., and Dec. 4 at Atlanta.

The 227 research problems submitted by members of the A. A. T. C. C. in a nationwide survey were screened from a number of angles when members of the association's executive committee on research, the chairmen of the advisory research committees in each section and the heads of the actitve research groups met recently in New York City. J. Robert Bonnar of General Dyestuff Corp., head of the executive research committee, presided at the meeting. Reviewing the research projects submitted in the survey the 22-man group divided them into four categories: (1) Referred to executive committee for further consideration. (2) Problem for a new research committee. (3) Problem for thesis subject by a student. (4) Problem for intersectional contest paper. Mr. Bonnar explained the intent of the meeting was to initiate more research by more members

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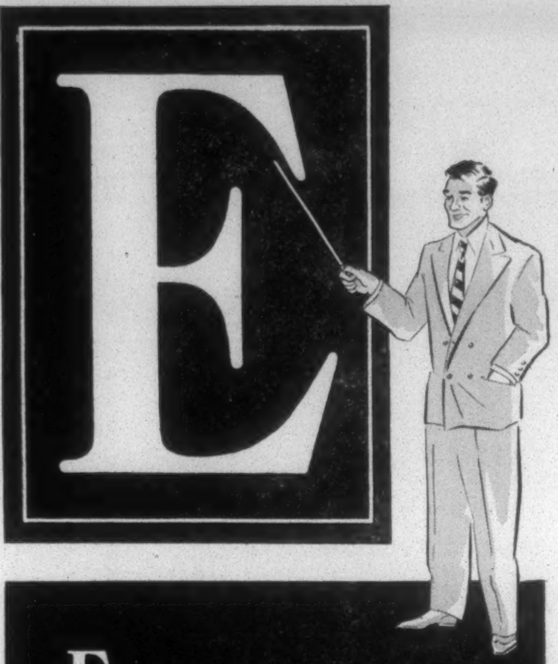
and to make the work easier and faster by having one problem handled by a group of members in one area, thus reducing traveling.

Mission Leaves For Britain March 27

A good-will mission representing all sections of the American cotton textile industry has been organized and will leave March 27 for Manchester, England, where conferences will be held with selected representatives of the British cotton industry on world problems affecting both industries, according to an announcement by Dr. C. T. Murchison, president, Cotton-Textile Institute, Inc. The mission will comprise delegates from the Cotton-Textile Institute, American Cotton Manufacturers Association, National Association of Cotton Manufacturers, Association of Cotton Textile Merchants of New York, and Textile Export Association of the United States.

The decision to form the mission, according to Dr. Murchison, was reached as a result of an invitation to visit Great Britain extended to the domestic industry by Sir E. Raymond Streat, head of the British Cotton Board, on his recent visit to this country. While here Sir Raymond came into contact with representatives of all divisions of the industry and frequently expressed the opinion to them that much good through a better understanding of English problems could be derived from visiting Lancashire and obtaining a close-up picture of recent developments there.

While the conferences will be limited to an exchange of views, it is believed that all factors relating to the world textile situation will be thoroughly explored. More than ever before in its history, the domestic industry finds that an important part of its business is affected by world conditions. American mills in 1947 exported approximately a billion and a half yards of cotton piece goods to foreign markets, or about 15 per cent of production. While export business is still in a flourishing state, a number of developments recently have injected an element of nervousness and concern into trade sentiment. Due to the increasing world-wide shortage of dollars, a number of countries in the so-called sterling area have been forced to impose rather severe restrictions on imports of American textiles. Canada is the most striking example. Long the leading market for American goods, Canada last November was forced by the lack of dollars to cut down imports of American goods. In 1947 Canada imported 278,324,059 square yards of American cotton textiles. If current restrictions are continued, Canadian imports this year are expected to fall to approximately



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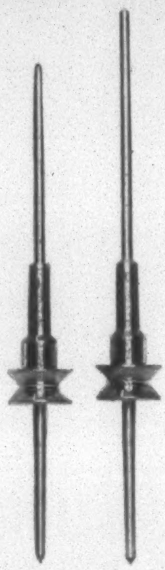

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85,000,000 square yards. Other important markets for American goods such as Australia, Rhodesia, and South Africa have also been compelled in recent months to stiffen import restrictions.

Exports of American textiles to sterling markets in 1947 in square yards were as follows: United Kingdom, 42,034,481; Erie, 19,956,914; Canada, 278,324,059; Newfoundland and Labrador, 1,645,897; British Honduras, 1,093,351; Bermuda, 270,647; Bahamas, 902,164; Jamaica, 14,134,351; Barbados, 1,346,865; Trinidad, 7,170,282; British Guiana, 4,738,182; Australia, 67,249,481; New Zealand, 7,624,825; British Oceania, 1,158,660; New Hebrides, 205,580; India, 9,462,080; Ceylon, 17,461,605; Burma, 107,291; Hong Kong, 3,196,255; British Malaya, 47,239,508; Southern Rhodesia, 9,189,173; Northern Rhodesia, 164,759; Union of South Africa, 92,858,077; British East Africa, 39,619,638; British West Africa, 6,681,525; Nigeria, 32,916,009; Anglo-Egyptian Sudan, 3,272,770.

The United States is now the world's leading exporter of cotton textiles, occupying the position held by Britain for more than a century and a half until 1933 when Japan jumped into the lead. Due to conditions arising out of the war, Lancashire mills since 1939 have been unable to play their customary role in the world market. Like the United States, English exporters were gravely affected by Japanese competition in the thirties.

The personnel of the mission is as yet incomplete but acceptances have been received from the following: Harry L. Bailey, director, Cotton-Textile Institute. (Mr. Bailey was formerly president of Wellington Sears Co., is a director of the Dan River Mills, served on the Combined Resources Board during the war and was a member of the Japanese missions in 1937 and 1945.); Fuller E. Callaway, Jr., chairman of the board, American Cotton Manufacturers Association and formerly president of Callaway Mills, LaGrange, Ga.; Malcolm G. Chace, Jr., treasurer, Berkshire Fine Spinning Associates, Providence, R. I.; Dr. William P. Jacobs, president, American Cotton Manufacturers Association, Charlotte, N. C.; Harvey W. Moore, treasurer and vice-president, Brown Mfg. Co., Concord, N. C.; C. T. Murchison, president, Cotton-Textile Institute; William C. Planz, vice-president, Neuss, Hesslein & Co., and vice-president, Textile Export Association; Robert T. Stevens, chairman of the board, J. P. Stevens & Co., and vice-president, Association of Cotton Textile Merchants; N. S. W. Vanderhoef, president, Turner, Halsey Export Corp., and president, Textile Export Association; Robert W. Philip, vice-president and director of research, Callaway Mills, LaGrange, Ga.; John W. Murray, secretary-treasurer, Textile Export Association and editorial director, Cotton-Textile Institute; and W. H. Suttenfield, vice-president and sales manager of American Yarn & Processing Co., Mt. Holly, N. C. Mr. Bailey will serve as chairman of the group. M. Stanley Brown, American representative of the British Cotton Board, will accompany the mission on its tour.

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Machinery And Metals Show Next Month

Keen interest is being manifested in the third Southern Machinery and Metals Exposition by top management, plant superintendents, plant engineers, production managers, purchasing agents, foremen and plant personnel. This year's show will feature methods for streamlining manufacturing operations, reducing costs and improving quality and production. The exposition is scheduled for April 5-8 in the Atlanta (Ga.) Municipal Auditorium.

Many companies that have not heretofore displayed their products in a major Southern industrial exposition are included in the growing list of exhibitors from throughout America, reports Alva S. Wilson, exposition president. Southern companies will display many new products, and national manufacturers will exhibit the latest equipment from continuous cutting saws to materials handling equipment. Motion pictures of the latest industrial processes, applications and manufacturing methods will be shown at the exposition theater in the Atlanta Municipal Auditorium. There will be a continuous showing throughout the four-day show.

Rapids-Standard Co., Inc., of Grand Rapids, Mich., which drew so much attention at last year's show with its moving conveyor line, has increased its exhibit space this year and will have an operating display. Yale & Towne Mfg. Co. of Philadelphia, Pa., is returning again with an outstanding exhibit of lift trucks, materials handling equipment and hoists. Included at the Yale booth for demonstration will be: (1) the new Zephyr fork truck, especially designed for low capacity loads (1,000, 1,500, 2,000-pound models being available) and for maneuvering in low headroom areas (83 and 68-inch masts being available); (2) the tilting fork Worksaver, Yale's battery powered hand truck, available in capacities up to 6,000 pounds and recommended where space is limited and where light weight is an important factor; (3) the portable platform scale for use in plants where weighing operations are intermittent and carried out in different locations; (4) the Easy Lift hand truck—a versatile handling tool used in virtually every phase of industry and (5) the new low-cost electric Load King hoist, designed to bring the electric wirerope-cable, drum-type hoist to a wider industry group.

Oakite Products, Inc., New York City, another repeat exhibitor, will show various specialized Oakite materials for production cleaning and metal surface conditioning, and other cleaning and sterilizing materials for plant maintenance and sanitation.

Dayton Rubber Co., Dayton, Ohio, will exhibit its in-

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dustrial belts for the textile, chemical, pulp and paper and heavy industries; Automatic Transportation Co. of Chicago, featuring electric lift trucks, will co-ordinate its exhibit with the John W. & Wm. H. Carlson Co. of Atlanta.

Southern States Equipment Corp., of Hampton, Ga., manufacturer of electrical transmission and distribution equipment, mechanical devices and textile machine parts, will exhibit at the show for the third successive time. Spalding Foundry Co., Atlanta, Ga., will exhibit castings manufactured for the textile, agricultural and industrial field in the South.

Lubricants will be shown by the Texas Co., a two-time exhibitor. In its past exhibit, this company spotlighted products of Southern manufacturers which were processed with Texaco products.

Invitations to attend the exposition are being sent to engineering and technical society members throughout the South, manufacturing executives, textile mill operators, pulp and paper companies, food processing companies, chemical plants and practically all types of manufacturing firms. This intense direct mail campaign has resulted in heavy advance hotel reservations. Those desiring information, registration tickets, details on exhibit space and other data should write the exposition office at 267 East Paces Ferry Road, N. E., Atlanta 5, Ga.

Statistical Quality Control Course Outlined

A manual outlining a short, intensive training course in statistical quality control, designed for the instruction of managerial personnel in manufacturing firms, is now on sale in printed form by the Office of Technical Services, Department of Commerce. The manual was prepared in 1944 by Holbrook Working and Edwin G. Olds, statisticians then associated with the Carnegie Institute of Technology, Pittsburgh, Pa. The Carnegie Institute was at that time developing quality control techniques for application to war industries under a contract with the Office of Production Research and Development. Twelve corollary reports, summarizing the wartime experiences of representative firms with quality control are also available from O. T. S.

During the war years, over 800 industrial firms, government arsenals and manufacturing firms sent representatives to O. P. R. D. training courses in statistical quality control, according to Working and Olds. Held at major educational institutions throughout the nation, the courses were intended to furnish students with sufficient information to

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institute quality control procedures in various types of manufacturing firms, thereby reducing avoidable industrial waste and improving the quality of products.

The course outline which is arranged for a seven-day training period, is divided into five general topic groups as follows: (I) Elementary principles of control charts used for measurements, including purposes and uses of control charts; calculating methods; fundamental theories involved; and verification of control chart principles. (II) Control charts for fraction defectives and for a number of defectives, including the construction of the charts; calculating control limits; binominal distribution; and significance of sample size. (III) Improvement of sensitivity of control charts, determination of standard values, adaptations needed in case of tool wear, and appraising processes by means of control charts. (IV) Use of control charts for measuring the number of defects per unit, including techniques of construction, breadth of applicability, and the Poisson distribution. (V) "Quality Assurance," devoted to practical considerations leading to acceptance or rejection; lot quality protection; average quality protection; use of standard sampling tables, and applicability of control charts.

The five topics are outlined in detail by class periods for the seven days. Sample charts, graphs, and record sheets are included. The manual (PB-17522, *Manual for an introduction to statistical methods of quality control in industry,* mimeographed, 79 pages) sells for $2.

National Textile Seminar Slated May 10-14

The third annual National Textile Seminar, sponsored by the Philadelphia Textile Institute, is slated to be held May 10-14 at Shawnee Inn, Shawnee-on-Delaware, Pa., with latest developments in important areas of the textile industry to be discussed by outstanding men in the industry. Topics already scheduled for the agenda include taxes, export markets, labor relations and new developments from research.

The seminar committee comprises Richard S. Cox, dean, Philadelphia Textile Institute, chairman; James M. Cole, vice-president, Cold Spring Bleachery, Yardley, Pa.; Bertrand W. Hayward, director, Philadelphia Textile Institute; Theodore B. Hayward, manager, wool department, Swift & Co., Philadelphia; M. Earl Heard, vice-president, Continental Mills, Inc., Philadelphia; Carl C. Mattmann, Jr., Textron, Inc., New York City; Russell C. Osborne, vice-president, Rider-Osborne-Devine, Inc., Philadelphia; H.

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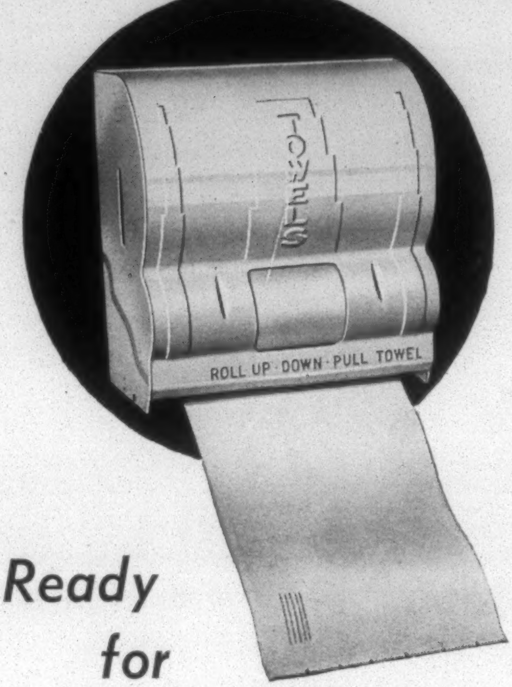

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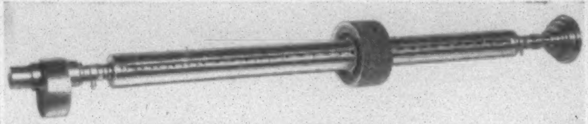

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Safety Conference To Be Held May 6-8

Due to a conflict in dates with the Southern Textile Association convention at Myrtle Beach, S. C., the 18th annual North Carolina Statewide Industrial Safety Conference dates have been changed from May 13-15 to May 6-8. The Safety Conference meeting will be held in Raleigh and those planning to attend are requested to make the change in their reservations at the Sir Walter Hotel.

Du Pont Output Sets Peacetime Record

Operations of E. I. du Pont de Nemours & Co. for the year 1947 reached the highest level of peacetime production in the company's 146-year history. In its annual report, distributed March 8 to 91,200 stockholders, Du Pont disclosed a volume of operating activity approximately 17 per cent above the previous peacetime record, established in 1946. Nylon, cellophane and pigments reached unprecedented sales levels, made possible, the report said, as a result of new manufacturing capacities and improved methods. Employment increased slightly over 1946 and totaled 75,945 at the close of the year, largest peacetime enrollment on record.

Total sales for the year were $783,400,000, or 21 per cent over last year. Over-all operating activity, including sales to customers, products manufactured for other companies under service agreements, and a small quantity of materials produced in government-owned plants, totaled $827,400,000. In 1946, this total was $709,300,000. Earnings applicable to each share of common stock for 1947, as announced Feb. 16, were equivalent to $9.88, as against $9.44 the previous year. The report revealed that the company's net earnings from operations of $98,891,000, after taxes, represented a return of 9.7 per cent on the total operating investment. Although net earnings from operations were up 19 per cent over 1946, the increase in operating investment from $891,800,000 to $1,015,800,000 resulted in a net gain in return on investment of only three-tenths of one per cent. Dividends paid in 1947 totaled $8 a share on the common stock, as compared to $7 in 1946.

Sales price adjustments made toward the end of 1946 and during 1947 have resulted in an average over-all increase of

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15 per cent above the pre-war average of 1939, despite "substantial and continuing" advances in costs. Between 1939 and 1946, on the average, there had been virtually no change in the index of the company's sales prices. The increase in U. S. Bureau of Labor Statistics' national wholesale price index since 1939 was 97 per cent. The increase in costs of the principal raw materials purchased by the company was given as 113 per cent since 1939 and the advance in average hourly wages paid employees as 79 per cent.

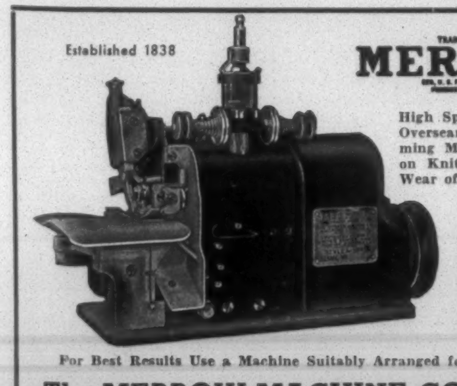
Expenditures of $115,600,000 were made during the year for additional plant capacities and for renewal and betterment of equipment and facilities, the report said. Added capacity provided was principally for production of nylon products and materials entering into their manufacture, acrylic resins for plastic molding compositions, acetate rayon yarn, cellophane, synthetic methanol, ethylene glycol for anti-freeze, polythene, plastic, pigments, sulfuric acid, nitrocellulose for lacquers, photographic film and coated fabrics, and synthetic detergents for textile and other purposes.

The report is signed by Walter S. Carpenter, Jr., who was elected chairman of the board on Jan. 19, 1948, at which time he relinquished his previous position as president.

Protest Changes In Textile Testing

A delegation estimated to represent one-third of the entire textile industry met in Washington March 4 and expressed unanimous opposition to any change in present atmospheric condition standards for testing textiles. The group formally protested the proposal by the Federal Specifications Board's Technical Committee to change the atmospheric standard to 73.5° F. and 50 per cent relative humidity from the existing 70° F. and 65 per cent relative humidity yardstick. Spokesmen for the F. S. B. and National Bureau of Standards explained that they were seeking a uniform standard for testing all materials, emphasizing that the question was still open for discussion.

Opposition to the proposal was based mainly upon the following ten points: (1) New standards would obsolete invaluable data gathered over a period of years by the industry. (2) The industry is beset upon all sides by competition from other fibers and its only hope of survival is through research, which should not be handicapped by a new set of standards. (3) Whereas the strength of cotton,



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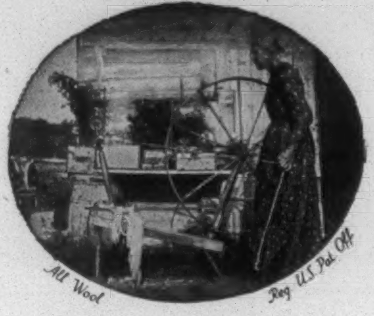

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linen, hemp, ramie and other cellulosic fibers decreases as the relative humidity decreases, the strength of wool, silk, rayon, nylon and other synthetics actually increases as the humidity drops. Cotton would test eight per cent weaker under the new standard while synthetics would be eight per cent stronger. (4) Moisture regain would be drastically affected. The relationship of fibers blended, now well understood, would be thrown into an utter state of confusion. (5) Electrostatic charges on cotton at 50 per cent humidity make testing practically impossible. (6) It is impractical to make tests on raw cotton fiber at 50 per cent humidity. Two different standards would be necessary, and could not be co-ordinated. (7) A majority of foreign countries now use 70 degrees and 65 per cent R. H. (8) More goods are sold under trade specifications than under government specifications. New interpretations would upset normal trade. (9) Many cotton goods are sold on a weight basis. Any change in humidity would greatly affect the weight and confuse not only domestic users but would upset export trade. (10) Costly equipment would be needed to maintain a relative humidity of 50 per cent.

Employee Recreation To Be Studied

Problems connected with employee recreation in the typical Southern mill village will form the theme of discussions at the fourth annual Southeastern Industrial Recreation Conference to be held Thursday, Friday and Saturday, April 8, 9 and 10, at the Hotel Greenville in Greenville, S. C. Organizations sponsoring the conference are the Industrial Recreation Association, a national non-profit organization; the industrial sections of the North and South Carolina Recreation Societies, the recreation section of the Georgia Citizens' Council, and co-operating agencies.

The 11-session program will feature round-table discussions under expert leadership, to permit a broad interchange of ideas and techniques through audience participation. Those attending will have opportunities of meeting with industrial recreation experts from many states and from a wide variety of companies.

"Co-operative Recreation" will be the subject of the discussion period at the first session April 8. Robert A. Turner, vice-president of the Industrial Recreation Association, and co-ordinator of community recreation for West Point Mfg. Co. of Lanett, Ala., will be the discussion leader. The afternoon theme will be "Bringing Cultural Activities to Employees," with John Eversman, recreation director of Ecusta Mills, Pisgah Forest, N. C., as leader. "Recreation for All" will be the subject at the evening session.

On Friday, April 9, Robert D. Delius, recreation direc-

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tor of Tennessee Eastman Corp. at Kingsport, Tenn., will lead the talk on "Interdepartmental Activities," and Alvin Davis, president of the Callaway Educational Association of Callaway Mills, LaGrange, Ga., will conduct the discussion of "Allotting the Recreation Dollar." These two sessions will be followed by a luncheon, at which C. L. Perreault, executive director of the Joanna Foundation of Joanna Mills, Goldville, S. C., will preside.

There will be two afternoon discussion periods; the first, on "Community Social Activities," being led by Paul Sheppard, recreation director of Laurens (S. C.) Mills. The second will deal with "Outside Group Activities." The conference banquet will be held that evening, with John W. Fulton of Chicago, executive secretary of the Industrial Recreation Association, presiding.

Saturday morning's meeting will be devoted to the subject of "Children's Activities," with Bess Givens, executive director of the recreation section of the Georgia Citizens' Council in Atlanta, as discussion leader. R. C. Skillman, president of the Industrial Recreation Association, and director of public relations for the Champion Paper and Fibre Co. of Hamilton, Ohio, and Canton, N. C., will speak on "What's Ahead for Employee Recreation" at the Saturday luncheon session. W. H. Harth, director of parks and recreation of Columbia, S. C., will preside.

C. H. Thomas, conference secretary, has asked that hotel reservations be sent to him well in advance of conference time in care of Dunean Mills, Greenville, S. C. The registration fee of $15, Mr. Thomas said, will cover admission to all of the sessions, two luncheons, the dinner and entertainment.

Industry Seen In Strong Position

The investment house of Blyth & Co., Inc., has issued an extensive and detailed report on Berkshire Fine Spinning Associates, Inc., which includes a general picture of the cotton-textile industry. Pointing out that the industry is now in the strongest position since 1900, it is emphasized that the demands of the first and second world wars resulted in large sums being accumulated in the industry, but that during the period after the second world war the attitude of the mills appears to be decidedly changed. Today, there is an insistent demand for new textile machinery.

Loom builders are understood to have backlogs of from two to three years while manufacturers of preparatory equipment are understood to have backlogs of from three to five years, and it would appear from this that mills have no intention of allowing their plants to detoriate as they did after World War I.

Of more importance, it is to be noted that mills apparently are not expanding their productive facilities. New looms, for example, are replacing old ones having about the same total capacity. If a balance in capacity was achieved in the late 1930s, it follows that with the increase in population which has taken place in the interim, together with a definite long-term trend of increasing per capita consumption of cotton cloth, the cotton textile manufacturers are now in a stronger position than at any time since the turn of the century. It should be noted in this connection that cotton textile machinery can process (spin, weave, etc.) most staple fibers (including rayon) as easily as it can cotton. The replacement of cotton for rayon which has taken

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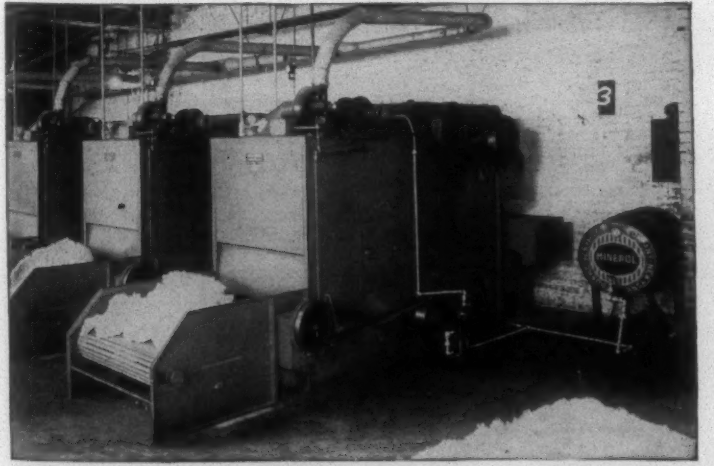

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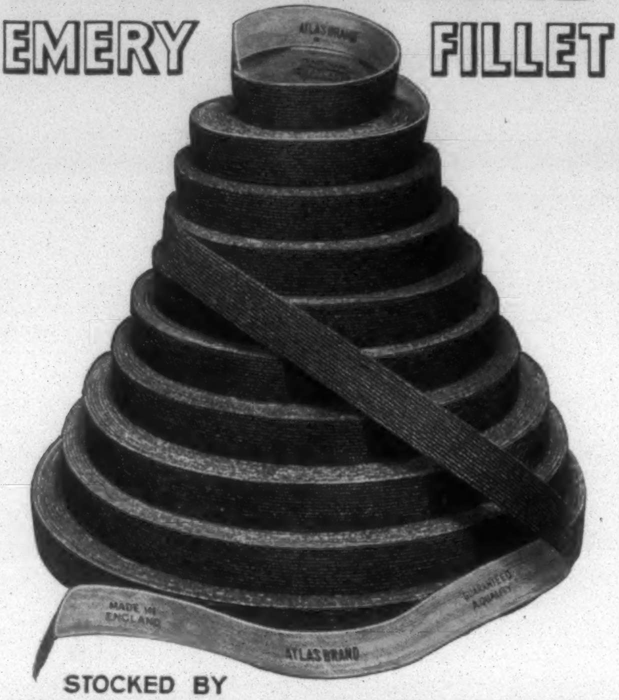

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place in recent years has been effected primarily within the cotton mills themselves, rather than by new competitors.

World War II brought with it another change favorable to the textile trade. The trend toward vertical integration was intensified during and immediately following the war, whereby gray cloth was converted by the mills themselves which then sold finished cloth direct to the cutting-up trade. It is believed that this policy will be continued. Accordingly, the number of independent converters, as such, has been greatly reduced; it is unlikely that the converters will again assume an important role in marketing. Cloth is in stronger hands. It is unlikely that the industry will again be subject to the severe price cutting which the small converter induced.

Continuing, the Blyth report states that Southern competition has been a subject of importance to New England mills since soon after the Civil War. It should be reasonable to assume that a balance North and South should have been worked out over a period of almost 80 years. It is believed that such a balance has been achieved in the production of fine goods. In 1870, 78 per cent of the cotton spindles were in New England, whereas today only about 25 per cent are in New England. The ratio of spindles in place in the North to those in the South has remained virtually constant since 1938.

Much of the former relative tax advantage previously enjoyed by the South has disappeared. Federal wages and hours legislation has resulted in reducing wage differentials between the North and the South, and when wages per unit of product are considered, the net differential is probably in favor of the Northern mills, particularly in the finer counts of yarn, production of which appears to be more skillfully done by Northern labor. It would appear that the South is best adapted to the production of coarser cloth and that over the years New England has competed successfully in the fine goods field.

Sayre Addresses Carolina Industrialists

Morris Sayre of New York, head of Corn Products Refining Co. and president of the National Association of Manufacturers, in a recent address at Charlotte, N. C., advocated a broad program of tax reduction, strict governmental economy, increased industrial production and aggressive support for the American free enterprise system. The meeting, at which Mr. Sayre was the principal speaker, was sponsored by various industrial organizations.

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Neuss, Hesslein Takes Mart Space

Neuss, Hesslein & Co., Inc., of New York City, one of the nation's largest textile concerns with plants in a half-dozen states and subsidiary branches in England, has leased display and sales space in the New Orleans (La.) International Trade Mart scheduled to open July 1, thus leading the way among textile firms desiring to take advantage of this world market place for interchange of goods between this nation, Latin America and the world.

Organized in 1865 as a linen importing business, Neuss, Hesslein & Co. entered the export field in 1874, shipping principally cotton textiles. Export activities gradually overshadowed import and in 1913 the import linen business was discontinued entirely. From a small beginning the company grew into a predominant position and for many years has been the leading exporter of cotton and rayon textiles from the United States.

It is these fine cottons and rayons which will form the center of the Neuss, Hesslein display in the super-lighted vistas of the International Trade Mart. Exhibits will be placed along corridors of rainless, air-conditioned, indoor streets, newest and most modern facilities available will be provided for the comfort and convenience of staffs and visiting merchants of all nations.

Neuss, Hesslein & Co. was founded by Edward Neuss and Samuel Hesslein. In 1893 Edgar J. Hesslein, son of the founder, became the principal partner with Eugene O. Beyer and John Staudt. The able management of Edgar J. Hesslein as principal partner and from 1911 to 1938 as president is credited by today's officials with playing an important part in the successful operation and growth of the business.

Edgar Hesslein was born in New York City on January 18, 1865. He attended private schools, both in the United States and in Europe, and about 1885 joined the firm of Neuss, Hesslein & Co. Mr. Hesslein spent most of his early association with the company traveling throughout Europe purchasing linens from various factories and later his travels carried him to various places in Central and South America. It was his foresight, courage and dynamic leadership that was the guiding factor not alone in promoting the export of cotton textiles from the United States, but in bringing his company into the predominant position of being the foremost and largest exporter of cotton piece goods from the United States. Through his able leadership the firm grew in size and importance from year to year and also carried it through periods of adversity, and on his death on Aug. 5, 1938, the company was considered to be the leader in the field of export.

The firm now is not only actively engaged in British made goods from England where it owns several mills and a bleachery, but it also owns, operates and acts as selling agent for mills in U. S. A. which puts it into the domestic business in a large way as well.

All of the present officers of the company have been with Neuss, Hesslein for more than 25 years. They include John K. Whitaker, president; Hugo H. Riedl, managing director of Neuss, Hesslein, Kempton, Ltd., in Manchester, England, a wholly-owned British subsidiary firm; William C. Planz, vice-president; George W. Walker, vice-president and treasurer; Arthur T. Alfke, vice-president; Henry Heinbockel, secretary; Sidney Milbauer, assistant secretary and manager of foreign credits; Ralph R. Ruch, assistant treasurer; Harold Starke, vice-president of Hesslein & Co.,

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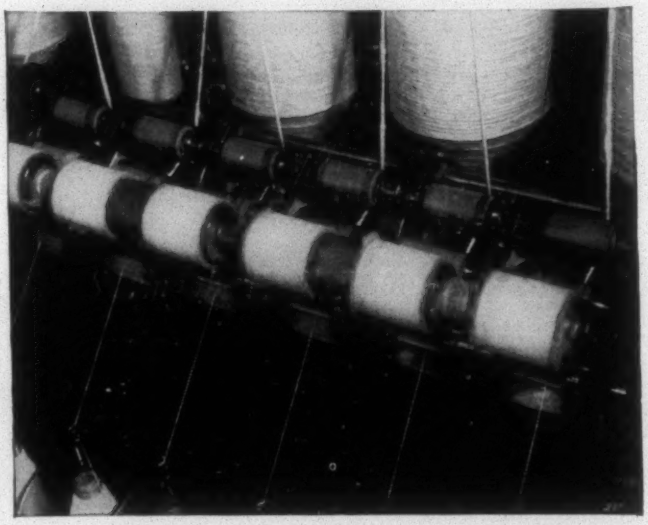

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Inc., Mill Sales Subsidiary, and Walter G. Willoschat, assistant secretary and manager of domestic credits for Hesslein & Co., Inc.

Subsidiaries wholly owned by Neuss, Hesslein, in addition to Hesslein Kempton, Ltd., include Commander Mills, Inc., at Sands Springs, Okla., manufacturer of sheeting, sheets and pillow cases; Plymouth Mfg. Co., Inc., at McColl, S. C., manufacturer of gray sheeting, and Belle-Vue Mfg. Co. at Hillsboro, N. C., manufacturer of colored woven suitings and ginghams.

Products sold by Neuss, Hesslein include denims, tickings and other colored woven fabrics produced by Texas Textile Mills, Inc., at Dallas, Tex.; print cloths manufactured by Chiquola Mfg. Co. at Honea Path, S. C.; colored yarn fabrics by Camperdown Co. at Greenville, S. C., and drills and twills of the Anniston Mfg. Co. at Anniston, Ala.

Plants owned by the British subsidiary include Nehesco Mills in Tarleton, England; Worsley Street Mills in Manchester; Nehesco Mills in Walsden, and Foxhill Bank Bleachworks in Lancashire.

Truckers Told Mills May Do Own Hauling

If trucking interests continue to increase their rates the textile industry may be forced to do more of its own freight hauling, George Alpers, traffic manager for Ameritex division of Cohn-Hall-Marx Co., stated at a meeting last month in New York City between textile and trucking men, gathered to hear the carriers' demands for a ten per cent boost in rates. The textile industry was represented by the National Textile Traffic Bureau and the Textile Fabrics Association while the Southern Motor Carriers Rate Conference was on hand for the truckers from the South.

John V. Hoey, director of the National Textile Traffic Bureau, appealed to the truckers to withdraw their proposal and wait and see what the margin of profit looked like, based upon the increase they received last December. The textile industry is now carrying the load for these haulers, he pointed out, saying that this industry is giving the truckers a healthy revenue, just double the cost of operation of the trucks per mile. The current rate from Charlotte, N. C., to Paterson, N. J., is 32.9 cents per mile on 24,000 pounds, 42.8 cents on 30,000 and 49.7 on 35,000 pounds, he said, which gives the haulers a nice profit margin.

Michael Miller, general manager of the Southern Motor Carriers Rate Conference, said that textiles could not be made an exception in the over-all increase to be put through. Other truckers agreed that higher costs of maintaining equipment, plus increased labor made a ten per cent rise imperative. The haulers made a profit on rayon, lost it on cotton, they asserted.

Suspension of the increase, scheduled to go into effect March 29, has been asked of the Interstate Commerce Commission by the North Carolina Cotton Manufacturers Association, Inc., the Cotton Manufacturers Association of South Carolina and the traffic departments of 481 textile mills in eight Southeastern states. Their petitions ask the commission to suspend the protested schedules as authorized by Section 216 (G) for the purpose of determining the lawfulness thereof alleged to be in violation of Sections 216 (B) and 219 (D) and not in conformity with the rate making standards provided by the act. Opposition by the cotton manufacturers has resulted in the I. C. C. ordering a hearing to be held March 25 in New York City, it is reported.

Bell Cites Industry's Output Effort

Rapid progress toward meeting the swollen public demand for cotton textiles has been made in the past year, and the industry is doing its utmost for the fullest possible production in the future, W. Ray Bell, president of the Association of Cotton Textile Merchants of New York, declared in New York City March 7. Mr. Bell spoke in a radio interview in the "Adventures in Industry" series presented by Station WMCA in co-operation with the Commerce and Industry Association of New York, Inc.

Production of cotton textiles in 1947, Mr. Bell stated, set a peacetime record of more than 11 billion square yards. It provided more goods for the consumer than it did at the 1942 wartime peak, since the higher production then included vast amounts of cloth for military purposes. Accumulated demands were translated instantly into increased production when government controls were removed at the end of 1946, and a gain in output of some 900 million square yards for the year resulted. All major categories of goods which the public required improved, he said, citing the increase of 350 million linear yards in output of print cloths last year as typical.

This in turn has been reflected in a great improvement in supplies of merchandise at the retail level. "You remember how hard it was to buy a bedsheet, or how only about a year ago people were still standing in line to get a white shirt," Mr. Bell commented. "Well, you can see the difference today, in any retail store you visit." Quality standards also have vastly improved from the cut constructions of wartime. "While supplies of many items still are tight, that the situation is better is apparent to even the most casual observer," he stated.

Interviewed by Thomas Jefferson Miley, secretary of the Commerce and Industry Association, Mr. Bell declared that restoration of freedom of enterprise and of free, open and competitive markets has been at the foundation of this improvement. He pointed to the continued effort for full production as the "only sound check to the inflationary tendencies which surround all industry." He expressed confidence in the future of a revitalized textile industry with its many new products and processes.

Mr. Bell's statement followed a half-hour dramatization of the growth of textiles from a cottage industry, through England's industrial revolution, and thence to its development in America as this nation's oldest factory industry. Featured in the dramatization were the birth of the industry here under Samuel Slater, development of early integrated manufacturing under Francis Cabot Lowell in New England, the rise of the South as illustrated by the career of William Gregg, and the modern functioning of the mills and of the Worth Street market as the central distributing point for the bulk of production of cloth in the nation.

The Societ publication, *Trud,* reported from Moscow recently that an overwhelming majority of textile mills in Russia are operating at a loss and receiving subsidies from the state. The publication reported that there are heavy losses because of spoilage of materials.

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Cotton Textiles Resist Price Upset

One of the outstanding evidences being cited of the general stability of the nation's economy is the resistance of primary cotton-textile markets to the recent upset in commodies and stocks.

Although cotton tumbled only slightly in comparison with the slide in grain prices, pessimists feared that damages to general confidence might appear and that its first showing might be in the markets for non-durable consumer goods such as cotton-textiles.

By precedent and tradition the cotton textile market should have been vulnerable. But mills are still sold out on production into the third and fourth quarter of the year despite operations running at around 110 per cent of two-shift capacity.

Among the reasons given for the sustained demand have been the following: First, the civilian market was starved of textiles during the war through the diversion of cotton textiles from civilian consumption to war use. Second, explanation the trade is the new consumer psychology by which consumers now seem to want two shirts or suits or dresses where they formerly were satisfied with one.

Third, explanation is the increase in national income from around $70 billions just before the war to over $200 billions. Along with this has gone a 14,000,000 increase in population since 1939. A fourth explanation is the continued inability of consumers to get hard goods, such as automobiles and new houses, resulting in the diversion of purchasing power into cotton textiles.

For two reasons the industry has been unable to expand to fill its market. It is up against an almost absolute shortage of both new machinery and of manpower. Delivery dates for the former, and particularly of spindles, range from six months to severla years. And despite four increases in wages in Southern and five in Northern cotton mills since VJ-Day, the industry is still unable to get all the labor it needs.—From *Christian Science Monitor.*

Good Textile Business Is Forecast

The cotton-textile industry is entering a "good business cycle" and some buyers are letting an excellent opportunity slip away by not placing orders at present, is the contention of Frank L. Walton. Waiting will only run the market up again and may result in a mad scramble for goods as was experienced in June, he states.

Mr. Walton, a vice-president of Catlin Farish Co., Inc., and former director of the Textile, Clothing and Leather Division of the War Production Board, states that some people seem to take for granted that "we must have either an inflationary market or a depression market."

Such thinking and such actions seem to be based on "in-

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flation-deflation psychology," he asserts, and is partly the result of several years of wartime operations and continually high prices and now the fear of a depression and decline from this level.

There will be a demand for every yard of cotton textiles produced this year, says Mr. Walton, who has been remarkably accurate in the past in his market observations.

Early in 1947, when pessimism spread throughout the textile industry, Mr. Walton took the position that the market would revive even stronger than it was, as noted, and subsequent events bore out his prediction.

Another of his observations that there was no need for government controls on production and prices of cotton textiles was officially substantiated this month in the report of the Office of Industry Co-operation of the Department of Commerce, which said production controls were "unnecessary" and that the industry was expanding the rate of output.

SPINNING ACTIVITY

Cotton Consumption Continues To Decline

According to the Census Bureau, 785,231 bales of lint cotton were consumed in February, compared with 860,202 bales during January and 839,375 bales during February of 1947. Consumption for the seven months ended Feb. 29 totaled 5,422,602 bales compared with 6,052,788 for the corresponding period a year previously.

Cotton consumed during February included: in cotton-growing states, 693,571 bales, compared with 762,929 in January this year, and 735,103 in February of last year, and for the seven-month period, 4,780,930 bales compared with 5,301,696 in the corresponding period a year ago; in the New England states, 73,273 bales, compared with 78,610 and 82,375, and for the seven-month period, 515,390 bales compared with 576,879.

Lint cotton on hand Feb. 29 in consuming establishments totaled 2,243,185 bales, compared with 2,257,112 a year previously; in public storage and compresses Feb. 29 were 4,470,307 bales, compared with 4,287,239 a year previously.

Cotton spindles active during February numbered 21,389,000 compared with 21,450,000 during January this year and 21,973,000 during February last year. Cotton spindles active during February included: in cotton-growing states 17,036,000 compared with 16,958,000 for January this year and 17,066,000 for February last year; and in the New England states, 4,029,000 compared with 4,063,000 and 4,383,000.

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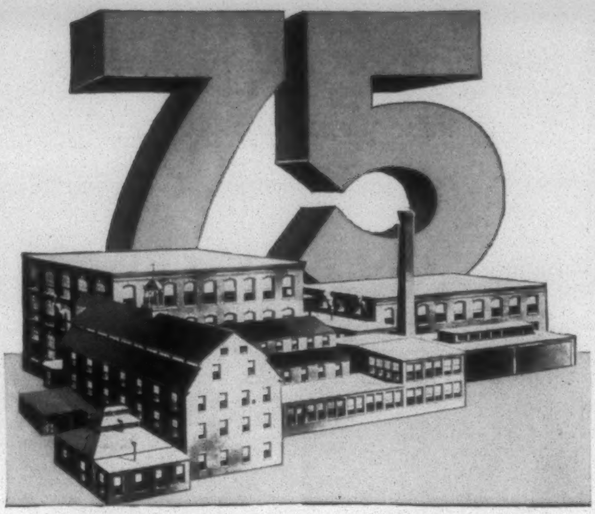

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Following are the addresses of Southern plants, warehouses, offices, and representatives of manufacturers of textile equipment and supplies who advertise regularly in TEXTILE BULLETIN. We realize that operating executives are frequently in urgent need of information, service, equipment, parts and materials, and believe this guide will prove of real value to our subscribers.

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ACME STEEL CO., 2840 Archer Ave., Chicago 8, Ill. Sou. Reprs.: F. H. Webb, Mgr., 603 Stewart Ave., S.W., Atlanta, Ga.; Royal C. Camp, P. O. Box 2948, Greensboro, N. C.; Clarence A. Carrell, 603 Stewart Ave., S.W., Atlanta, Ga.; Earl E. Drewry, 603 Stewart Ave., S.W., Atlanta, Ga.; G. R. Easley, P. O. Box 1087, Greenville, S. C.; T. A. Kennedy, 34 W. Lock Lane, Richmond, Va.; W. G. Polley, Signal Mountain, Chattanooga, Tenn.; H. C. Sharpe, 1226 Bryn Mawr, Orlando, Fla.; John W. Webb, 603 Stewart Ave., S.W., Atlanta, Ga.; J. E. Tyler, 326 St. Paul Place, Baltimore, Md.; N. C. Brill, 407 Shell Bldg., Houston 2, Tex.; J. C. Brill, 309 Magazine St., New Orleans, La.; The Philadelphia Office, Terminal Commerce Bldg., Broad and Callowhill Sts., Philadelphia, Pa.

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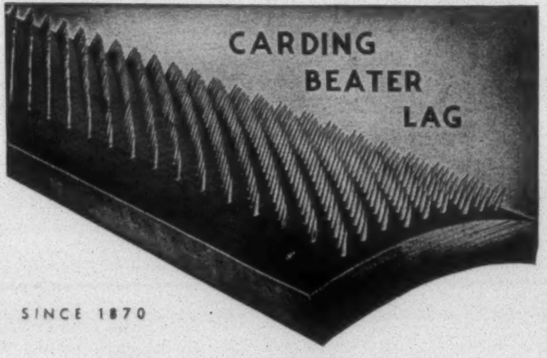

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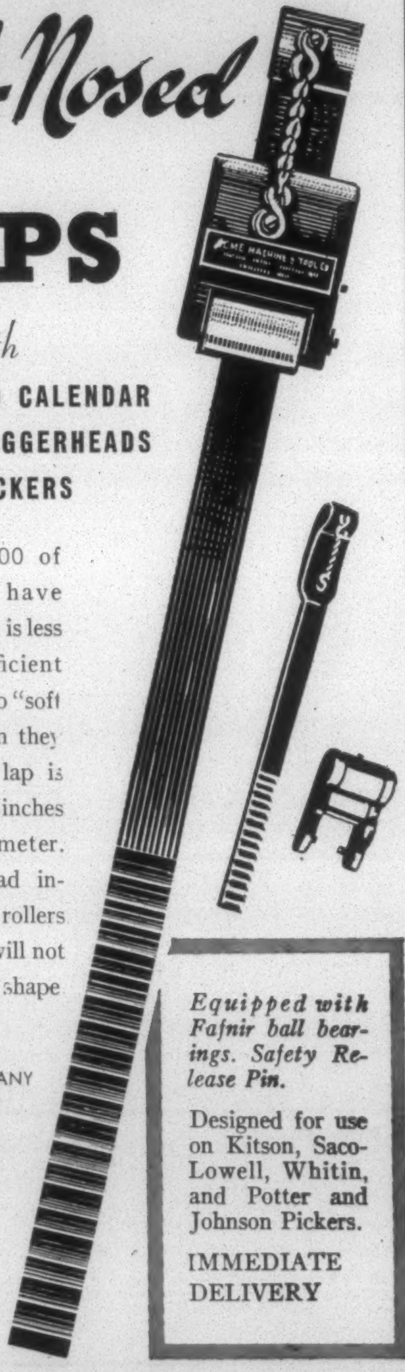
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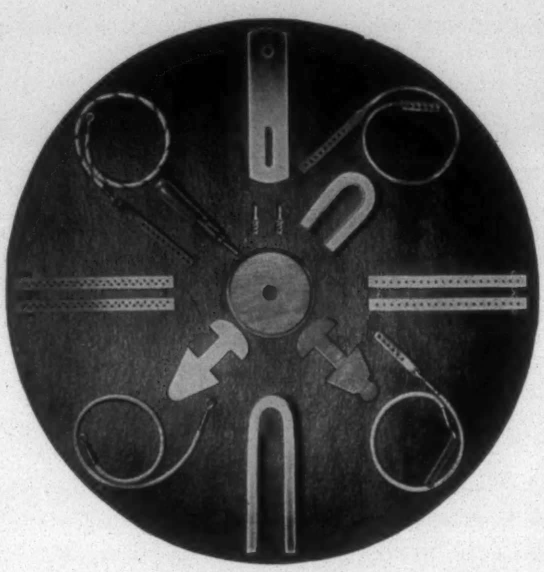

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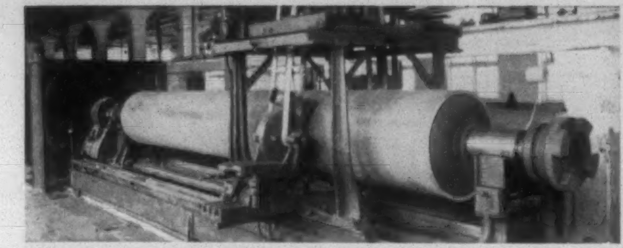

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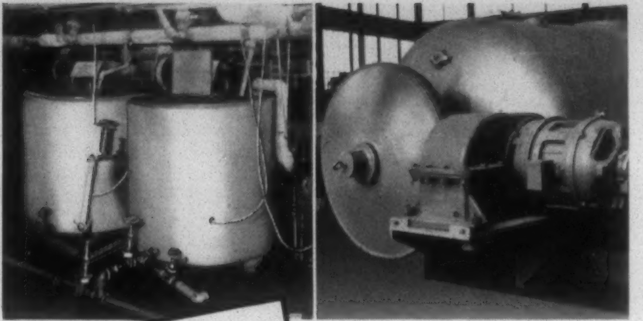

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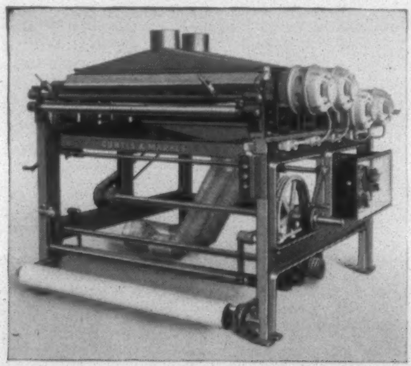

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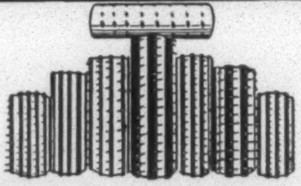

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WANTED—Position as Superintendent or Assistant Superintendent of your mill. Have been superintendent of large Southern Combed Yarn Mill for past two years; 15 years' prior experience as superintendent and overseer. Married; age 47. Best of references. Write "Southern Yarn," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

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Write "Cotton Spinning,"
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Write "Weave Mill," care Textile Bulletin,
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MASTER MECHANIC with both steam and electrical experience wanted by large upstate New York underwear manufacturer. Splendid opportunity for a man of real ability. State qualifications. All correspondence strictly confidential. Write "Mechanic," care Textile Bulletin, P. O. Box 1225, Charlotte 1, N. C.

WANTED

Prominent chemical manufacturer wants services of technical representative, Southern States, work among finishing mills. Age 21-30, textile school or chemical education desirable. Starting salary commensurate with ability; good future.

Apply "Chemical,"
care Textile Bulletin,
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WANTED

Position as Superintendent Sales Yarn Mill. Now employed as superintendent; good reason for desiring change. Over 20 years' experience manufacturing high grade knitted yarn, both combed and super karded. My references are customers who have used my yarns and the best spinning mills in the South. Do not drink or have any bad habits.

Write "Sales," care Textile Bulletin,
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Before Closing Down

— TEXTILE INDUSTRY HAPPENINGS AS THE MONTH ENDED —

S. T. A. Meeting

¶ Nathaniel M. Mitchell, president of Barnes Textile Associates, Inc., will discuss "The Textile Situation in India" at the Spring meeting of the Southern Textile Association's South Carolina Division at Parker High School, Greenville, April 3. Job J. Mills, consulting engineer, will present a paper and lead a discussion on "Evaluating the Results of Textile Tests." The meeting will begin at 10:15 a. m.

A. C. M. A. Convention

¶ The international situation in regard to textiles will be the general theme of the American Cotton Manufacturers Association convention in New Orleans, La., April 22-24, according to an announcement from A. C. M. A. Secretary F. Sadler Love. Between 700 and 800 persons are expected to attend. Following a noon meeting of the association's board of government, the first regular session will be held at 2:30 p. m., April 22 in the Roosevelt Hotel, convention headquarters. Other business meetings are scheduled for the mornings of April 23 and 24. Of particular interest will be reports from members of the recent textile mission to Japan and the group which will return from England April 20. The annual banquet will be held Friday night. The Saturday morning session will feature addresses by President William P. Jacobs and Chairman Fuller E. Callaway, Jr. Committee reports will be presented and new officers elected at the final session, which will end at 1 p. m.

New Textile Show

¶ Announcement of new textile machinery show, scheduled May 8-12, 1950, at Atlantic City, N. J., comes from Boston following a meeting of a committee representing the National Association of Textile Machinery Manufacturers, which will sponsor the exhibition. Plans for holding the "American Textile Machinery Exhibition (and associated industries)" were made public by Erwin N. Darrin (vice-president of the Draper Corp.), the committee chairman, and Albert C. Rau, vice-president of Campbell-Fairbanks Exposition, 928 Park Square Building, Boston, in charge of the show.

Mill News

Spray, N. C.—Fieldcrest Mills is discontinuing the production of woolen piece goods, and some of the woolen mill equipment will be moved to Draper, N. C., and the finishing plant at Spray for use in the manufacture of the present line of all-wool blankets. Consideration is being given to the use of carding and spinning machinery in production of carpet yarns, but the balance of equipment and supplies will be sold. The 300 woolen mill employees and supervisors will be given priority for positions which open in other Fieldcrest plants.

Rock Hill, S. C.—Rock Hill Printing & Finishing Co. employees have just received their second safety award for conspicuous achievement in accident prevention, William H. Grier, general manager, makes known. The certificate of merit was awarded for the operation of the plant for 1,424,353 man-hours without a lost-time accident. The first safety award was presented less than a year ago for outstanding accident prevention following a 79 per cent reduction of lost-time accidents for the period Jan. 1, 1945, through April 1, 1947.

Personal News

E. D. Bagwell, formerly of Tucapau, S. C., is now superintendent of Linda Cotton Mills, Cowpens, S. C.

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